CITY OF KELSO, WASHINGTON

SHORELINE MASTER PROGRAM UPDATE

Approved by Department of Ecology April 15, 2022
Adopted by City Council November 16, 2021

Acknowledgements

Although it is difficult to thank everyone who contributed countless hours to the development and review of this document, the City would like to acknowledge and thank the following individuals:

City Council
David Futcher, Mayor
Larry Alexander
Jim Hill
Kimberly Lefebvre
Nancy Malone
Todd McDaniel
Rick Roberson
Gary Archer
Jared Franklin
Dan Myers
Gary Schimmel

Planning Commission
Rick VonRock, Chair
Daniel Graves
Charles Hendrickson, Vice Chair
Clark Hislop
James Webb
Jared Wade

Project Management Team
Steve Taylor, City Manager
Michael Kardas, P.E., Community Development Director / City Engineer
Amy Mullerleile
Gregg Dohrn, G. R. Dohrn and Associates
Jennifer Hughes, Parametrix
Elaine Placido, Cowlitz County

Technical Advisory Committee
Cowlitz County
Cities of Kalama, Castle Rock, Woodland, and Longview
Cowlitz-Wahkiakum Council of Governments
U.S. Army Corps of Engineers
U.S. Department of Agriculture
National Oceanic and Atmospheric Administration
Washington Department of Fish and Wildlife
Washington Department of Natural Resources
Washington Department of Ecology
Port of Longview
Port of Kalama
Port of Woodland
Weyerhaeuser
PacifiCorp
Kapstone Paper

Project Consultants
Parametrix

The Watershed Company
G. R. Dohrn and Associates

Project Support Team
Stephanie Helem, City of Kelso
Steve Langdon, City of Longview
Sarah Cassal, Washington State Department of Ecology
Rebecca Schroeder, Washington State Department of Ecology
Chrissy Bailey, Washington State Department of Ecology
T.J. Keiran, Cowlitz-Wahkiakum Council of Governments

TABLE OF CONTENTS

Appendices

This page intentionally left blank.

1. Introduction

1.1 Title

This document shall be known and may be cited as the Kelso (City) Shoreline Master Program (referred to in this document as Program).

1.2 Adoption Authority

This Program is adopted under the authority granted by the Shoreline Management Act (SMA, or the Act) of 1971 (Revised Code of Washington [RCW] 90.58) and Chapter 173-26 of the Washington Administrative Code (WAC) as amended.

1.3 Purpose and Intent

A. To guide the future use and development of shorelines in the City in a positive, effective, and equitable manner consistent with the Act;

B. To promote the public health, safety, and general welfare of the community by providing long range, comprehensive policies and effective, reasonable regulations for development and use of the City's shorelines; and

C. To experience no net loss of shoreline ecological functions and processes and to plan for restoring shorelines that have been impaired or degraded by adopting and fostering the following policy contained in RCW 90.58.020, Legislative Findings for shorelines of the state:

"It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner, which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the State and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto. . .

In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the State shall be preserved to the greatest extent feasible consistent with the overall best interest of the State and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment or are unique to or dependent upon use of the State's shoreline. Alterations of the natural condition of the shorelines of the State, in those limited instances when authorized, shall be given priority for single family residences, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the State, industrial and commercial

developments which are particularly dependent on their location on or use of the shorelines of the State, and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the State.

Permitted uses in the shorelines of the State shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water."

1.4 Governing Principles

A. The goals, policies, and regulations of this Program are intended to be consistent with the Washington State (State) shoreline master program guidelines in Chapter 173-26 of the WAC. The goals, policies, and regulations are informed by the Governing Principles in WAC 173- 26-186 and the policy statements of RCW 90.58.020.

B. Any inconsistencies between this Program and the Act must be resolved in accordance with the Act.

C. The regulatory or administrative actions contained in this Program must not unconstitutionally infringe on private property rights or result in an unconstitutional taking of private property.

D. The regulatory provisions of this Program are limited to shorelines of the state, whereas the planning functions of this Program extend beyond the designated shoreline boundaries, given that activities outside the shoreline jurisdiction may affect shorelines of the state.

E. The policies and regulations established by this Program shall be coordinated with those policies and rules of the Kelso Comprehensive Plan and Development Regulations as well as RCW 34.05.328, Significant Legislative Rules.

F. Protecting the shoreline environment is an essential statewide policy goal, consistent with other policy goals. This Program protects shoreline ecosystems from such impairments in the following ways:

1. By using a process that identifies, inventories, and ensures meaningful understanding of current and potential ecological functions provided by shorelines;

2. By including policies and regulations that require mitigation of adverse impacts in a manner that results in no net loss of shoreline ecological functions. The required mitigation shall include avoidance, minimization, and compensation of impacts in accordance with the policies and regulations for mitigation sequencing in WAC 173-26-201(2)(e) Environmental impact mitigation;

3. By including policies and regulations to address cumulative impacts and by fairly allocating the burden of addressing such impacts among development opportunities; and

4. By including regulations and regulatory incentives designed to protect shoreline ecological functions, and to restore impaired ecological functions where such functions have been identified.

1.5 Liberal Construction

As provided for in RCW 90.58.900, Liberal Construction, the Act is exempted from the rule of strict construction; the Act and this Program shall therefore be liberally construed to give full effect to the purposes, goals, objectives, and policies for which the Act and this Program were enacted and adopted.

1.6 Severability

Should any Section, Subsection, paragraph, sentence, clause, or phrase of this Program or its application to any person or situation be declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this Program or its application to any other person or situation.

1.7 Relationship to Other Plans and Regulations

A. Proponents of shoreline use or development shall comply with all applicable laws prior to commencing any shoreline use or development.

B. Where this Program makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment or current edition shall apply.

C. Uses, developments, and activities regulated by this Program may also be subject to the provisions of the following: the City of Kelso Comprehensive Plan; the Kelso Parks and Recreation Plan (2014); the Washington State Environmental Policy Act (SEPA; RCW 43.21C and WAC 197-11); other provisions of Kelso Municipal Code (KMC), specifically CMC Title 18 Zoning Code; and various other provisions of local, state, and federal law, as may be amended.

D. In the event this Program conflicts with other applicable City policies or regulations, they must be interpreted and construed so that all the language used is given effect, with no portion rendered meaningless or superfluous, and unless otherwise stated, the provisions that provide the most protection to shoreline ecological processes and functions shall prevail.

E. Projects and plans in the shoreline jurisdiction that have been previously approved through local and state reviews in accordance with the Shoreline Master Program in effect at the time, shall remain in full force and effect until such time that they expire or are expressly changed by the City and DOE as appropriate.

1.8 Effective Date

This Program and all amendments thereto shall take effect fourteen (14) days after written notice of approval from the Washington Department of Ecology (Ecology) and shall apply to new applications submitted on or after that date and to applications that have not been determined to be fully complete by that date.

2. Definitions

The following definitions shall be used to guide the implementation of this Program. In the event of any question about the use, applicability, or interpretation of these terms, the City shall make an administrative determination in consultation with Ecology, as appropriate.

Accessory – A use, building or structure that is subordinate to and the use of which is incidental to that of the main activity, structure, building or use on the same lot or parcel. If an accessory structure is attached to the main building by a common wall or roof, such accessory building shall be considered a main part of the main building.

Act – The Washington State Shoreline Management Act of 1971, as amended, RCW 90.58.

Adjacent lands – Lands adjacent to the shorelines of the state (not within shoreline jurisdiction) (RCW 90.58.340).

Adjacent to – For the purposes of the Critical Areas Regulation in Appendix C, any activity or development located:

1. On a site immediately adjoining a critical area;
2. A distance equal to or less than the required critical area buffer or zoning and building setback requirements;
3. A distance equal to or less than one-half mile (2,640 feet) from a bald eagle's nest;
4. A distance equal to or less than 300 feet upland from a stream, wetland or water body;
5. Bordering or within the floodway, floodplain, or channel migration zone; or
6. A distance equal to or less than 200 feet from a critical aquifer recharge area.

Agriculture or **agricultural activities** – Agricultural uses and practices including, but not limited to, producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow (plowed and tilled, but left unseeded); allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

Agricultural equipment and **agricultural facilities** – Includes, but is not limited to:

1. The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; upland finfish rearing facilities; water diversion, withdrawal, conveyance, and use equipment and facilities including, but not limited to, pumps, pipes, tapes, canals, ditches, and drains;

2. Corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands;

3. Farm residences and associated equipment, lands, and facilities; and

4. Roadside stands and on-farm markets for marketing fruit or vegetables.

Agricultural land – Those specific land areas on which agricultural activities are conducted as of the date of adoption of a local master program pursuant to these guidelines as evidenced by aerial photography or other documentation. After the effective date of the master program, land converted to agricultural use is subject to compliance with the requirements of the master program.

Agricultural products – Includes, but is not limited to, horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock including both the animals themselves and animal products including, but not limited to, meat, upland finfish, poultry and poultry products, and dairy products.

Alluvial fan – A low, outspread, relatively flat to gently sloping mass of loose alluvium, shaped like an open fan, deposited by a stream where it issues from a narrow valley, or where a tributary stream issues into the main stream, or wherever a constriction in a valley abruptly ceases or the gradient of the stream suddenly decreases; it is steepest near the mouth of the valley where its apex points upstream, and it slopes gently and convexly outward with gradually decreasing gradient.

Alluvium – Sand, clay, etc., gradually deposited by moving water, as along a riverbed, stream or shore of a lake.

Alteration – A human action which results in a physical change to the existing condition of land or improvements including but not limited to: clearing vegetation, filling and grading and construction of structures or facilities including impervious surfaces.

Anadromous fish – Any fish that spawns and rears in freshwater and matures in the marine environment.

Appurtenance – A structure or development customarily incidental to and located upon the same lot occupied by the main use or building.

Appurtenance, residential – A structure or development incidental to a single-family residence in accordance with the provisions of WAC 173-27-040(2)(g).

Aquaculture – The culture or farming of fish, shellfish, or other aquatic plants and animals.

Aquifer recharge area – Areas where water infiltrates the soil and percolates through it and surface rocks to the groundwater.

Associated wetlands – Those wetlands that are in proximity to and either influence or are influenced by a lake, river or stream subject to the Shoreline Management Act.

Average grade level – The average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure: In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high water mark. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure.

Base flood – A flood event having a one percent chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

Berm – A linear mound or series of mounds of earth, sand or gravel generally paralleling the water at or landward of the OHWM. Also a linear mound used to screen an adjacent activity, such as a parking lot, from transmitting excess noise and glare.

Best Management Practices (BMP) – The schedules of activities, prohibitions of practices, maintenance procedures, and structural or managerial practices approved by the Washington Department of Ecology that, when used singly or in combination, control, prevent or reduce the release of pollutants and other adverse impacts to waters of the State.

Bioengineering – The use of biological elements, such as the planting of vegetation, often in conjunction with engineered systems, to provide a structural shoreline stabilization measure with minimal negative impact to the shoreline ecology.

Boating facility for the purposes of this Program – Any public or private facility for mooring, storing, or transfer of materials from vessels on the water, such as docks and piers, including on-land related facilities such as approaches and ramps, and includes any private and publicly accessible launch sites or facilities. A boating facility does not include on-land accessory facilities such as parking or storage. Docks, buoys, and marine railways that are accessory to four (4) or fewer single-family residences are also not boating facilities.

Breakwater – A structure aligned parallel to shore, sometimes shore-connected, that provides protection from waves.

Buffer – An area that is part of or adjacent to a jurisdictional shoreline or designated critical area that functions to avoid loss or diminution of the ecologic functions and values of the critical area. Specifically, a buffer may:

1. Preserve the ecologic functions and values of a system including, but not limited to, providing microclimate conditions, shading, input of organic material, and sediments; room for variation and changes in natural wetland, river, or stream characteristics; providing for habitat for lifecycle stages of species normally associated with the resource;

2. Physically isolate a critical area such as a wetland, river, or stream from potential disturbance and harmful intrusion from surrounding uses using distance, height, visual, and/or sound barriers, and generally including dense native vegetation, but also may include human-made features such as fences and other barriers; and

3. Act to minimize risk to the public from loss of life, well-being, or property damage resulting from natural disasters such as from landslide or flooding.

Building height – The vertical distance between average grade and the highest part of the coping of a flat roof, or the deck line of a mansard roof, or the average height of the highest gable of a pitched or hipped roof. The height of a stepped or terraced building is the maximum height of any segment of the building. Television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines. Temporary construction equipment is excluded in this calculation.

Bulkhead – A structure of timber, concrete, steel, rock, or similar substance located parallel to the shore, at or along the OHWM, which has as its primary purpose to contain and prevent the loss of soil by erosion, wave, or current action.

Channel migration zone (CMZ) – The area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings. The "channel migration zone" does not include areas that are separated from the active river channel by legally existing artificial structures or channel constraints that limit channel movement. Examples of such structures and constraints include transportation facilities built above or constructed to remain intact through a 100-year flood (such as an arterial road, public road serving as a sole access route, or a state or federal highway or a railroad), levees, and other lawfully established structures that are significant investments likely to be repaired and maintained even if damaged.

Clearing – The destruction or removal of vegetation from a site by physical, mechanical, chemical or other means. This does not include landscape maintenance or pruning consistent with accepted horticultural practices, which does not impair the health or survival of the trees or native vegetation.

Commercial dredging – Applies to establishments engaged in the dredging of sand, gravel or rocks for resale or wholesale marketing.

Commercial fishing – The activity of capturing fish and other seafood under a commercial license.

Compensatory mitigation – Replacing project-induced losses or impacts to a critical area or its buffer.

Covered moorage – A roofed structure over a boat, either with or without walls and typically supported by posts mounted on the dock.

Critical aquifer recharge area – Areas with a critical recharging effect on aquifers used for potable water as defined by the Washington State Growth Management Act and as
designated in Appendix C of this Program.

Critical areas – Those areas and ecosystems as defined under RCW 36.70A and this Program, which include:

1. Wetlands;
2. Areas with a critical recharging effect on aquifers used for potable waters;
3. Fish and wildlife habitat conservation areas;
4. Frequently flooded areas; and
5. Geologically hazardous areas.

Critical facilities – Include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations that produce, use, or store hazardous materials or hazardous waste.

Critical habitat – Specific geographical areas that possess physical or biological features that are essential to the conservation of federally listed species. These designated areas may require special management considerations or protection.

Cumulative impacts – The results of incremental actions when added to past, present, and reasonably foreseeable future actions. Cumulative impacts can be deemed substantial and subject to mitigation conditions even though they may consist of individual actions having relatively minor impacts.

Date of filing - The date of actual receipt by Ecology of the City's decision on a shoreline substantial development permit.

a) For projects that only require a Shoreline Substantial Development Permit: the date that Ecology receives the City's decision.
b) For a Shoreline Conditional Use Permit (SCUP) or Shoreline Variance (SVAR): the date that Ecology's decision on the SCUP or SVAR is transmitted to the applicant

and the City.

c) For SDPs simultaneously mailed with a SCUP or SVAR to Ecology: the date that Ecology's decision on the SCUP or SVAR is transmitted to the applicant and the City.

Development – An activity consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature that may interfere with the normal public use of the surface of the waters overlying lands subject to the Shorelines Management Act of 1971 at any state of water level (RCW 90.58.030(3a)). Development does not include dismantling or removing structures if there is no other associated development or re-development. See also Substantial Development.

Dike – An artificial embankment normally set back from the bank or channel in the floodplain for the purpose of keeping floodwaters from inundating adjacent land.

Dock – A structure built over or floating upon the water and used as a landing place for boats and other marine transport, fishing, swimming, and other recreational uses. A dock typically consists of the combination of one or more of the following elements: pier, ramp, and/or float.

Dredging – The removal of earth, sand, gravel, silt, or debris from below the OHWM of any river, stream, pond, lake, or other water body and beneath the area of seasonal saturation of any wetland.

Ecological functions or **shoreline functions** – The work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem.

Ecosystem-wide processes – The suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions.

Enhancement – Alterations performed to improve the condition of an existing environmentally degraded area so that the functions provided are of a higher quality. Enhancements are to be distinguished from resource creation or restoration projects.

Erosion – The general process or the group of processes whereby the material of the earth's crust are loosened, dissolved, or worn away, and simultaneously moved from one place to another, by natural forces, that include weathering, solution, corrosion, and transportation, but usually exclude mass wasting.

Erosion hazard area – See "geologic hazard areas."

ESA – The Endangered Species Act, specifically Section (4)(d), Protective Regulations.

Essential public facilities – Includes but is not limited to, airports, state education facilities, state and regional transportation facilities, state and local correctional facilities, solid waste handling facilities, medical care facilities, mental health facilities, and group homes.

Excavation – The mechanical removal of earth material.

Exempt/Exemption – Developments that are set forth in Section 3.2, Exemptions from Shoreline Substantial Development Permit, of this Program that are not required to obtain a shoreline substantial development permit (SSDP), but which must otherwise comply with applicable provisions of the Act and this Program.

Existing and ongoing agricultural activities – See "agricultural activities."

Fair market value – The open market bid price for conducting the work, using the equipment and facilities, and purchase of the goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials (WAC 173-27-030(8)).

Feasible – That an action, such as a development project, mitigation, or restoration requirement, meets all of the following conditions:

1. The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;

2. The action provides a reasonable likelihood of achieving its intended purpose; and

3. The action does not physically preclude achieving the project's primary intended legal use.

In cases where this Program requires certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the City may weigh the action's relative public costs and public benefits, considered in short- and long-term timeframes.

Fill – The addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

Fish – As used in these regulations, refers to resident game fish; anadromous fish and specified salmonoids listed as endangered or threatened under the Federal Endangered Species Act, Section (4)(d), or the Washington State List of Threatened and Endangered Species.

Fish and wildlife habitat conservation areas – Those habitats designated by WAC 365-190130 and include all areas listed in the WAC.

Float – An anchored (not directly to the shore) floating platform that is free to rise and fall with water levels and is used for water-dependent recreational activities such as boat mooring, swimming or diving. Floats may stand alone with no over-water connection to shore or may be located at the end of a pier or ramp.

Floating home – A single-family dwelling unit constructed on a float, that is moored, anchored, or otherwise secured in waters, and is not a vessel, even though it may be capable of being towed.

Flood or **flooding** – A temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

Flood hazard reduction – Measures taken to reduce flood damage or hazards. Flood hazard reduction measures may consist of nonstructural or indirect measures, such as setbacks, land use controls, wetland restoration, dike removal, use relocation, bioengineering measures, and storm water management programs; and of structural measures, such as dikes, levees, and floodwalls intended to contain flow within the channel, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

Flood plain – Synonymous with one-hundred-year flood plain and that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act.

Floodway – The area, as identified in a master program, that either:

1. Has been established in federal emergency management agency flood insurance rate maps or floodway maps; or

Forest practices – Any activity conducted on or directly related to forest land and relating to growing, harvesting, or processing timber. These activities include but are not limited to: road and trail construction, final and intermediate harvesting, pre-commercial thinning, reforestation, fertilization, prevention and suppression of disease and insects, salvage of trees, and brush control (WAC 222-16-010(21)).

Frequently flooded areas – Those areas of special flood hazard which are commonly identified as critical areas in local government development regulations.

Game fish – "Game fish," as described in the Washington Game Code, spend their life cycle in freshwater.

Geologic hazard areas – Areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

Geotechnical assessment – An assessment prepared by a geotechnical engineer licensed by the state of Washington, which evaluates the site conditions and the effects of a proposal, and identifies mitigating measures to ensure that the risks associated with geologic hazards will be substantially reduced.

Geotechnical report or **geotechnical analysis** – A scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected landform and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

Grading – The movement or redistribution, including excavation or fill, of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

Groin – A barrier-type structure extending from the stream bank into a water body for the purpose of the protection of a shoreline and adjacent upland by influencing the movement of water and/or deposition of material.

Groundwater – That part of the subsurface water that is in the saturated zone all waters that exist beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water within the boundaries of this state, including underground streams, from which wells, springs, and ground water runoff are supplied, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves.

Hazard tree – Dead or dying trees, dead parts of live trees, or unstable live trees (due to structural defects or other factors) that are within striking distance of people or primary structures. Hazard trees have the potential to cause property damage, personal injury or fatality in the event of a failure.

Institutional – A use or development whose purpose is to serve or promote a government, educational, charitable, or religious organization or its mission. Examples include, but are not limited to: community centers, educational facilities, government offices, hospitals, and religious facilities.

In-stream structure – A structure placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structure does not apply to stormwater outfalls, which are regulated as utilities.

Interested party – All persons who have notified local government of their desire to receive a copy of the final order on a permit under WAC 173-27-030 (WAC 173-27-030(12)).

Invasive – A nonnative plant or animal species that either:

1. Causes or may cause significant displacement in range, a reduction in abundance, or otherwise threatens, native species in their natural communities;
2. Threatens or may threaten natural resources or their use in the state;
3. Causes or may cause economic damage to commercial or recreational activities that are dependent upon state waters; or
4. Threatens or harms human health (RCW 77.08.010(28)).

Landfill – A disposal facility or part of a facility at which solid waste is placed in or on land.

Landslide – Abrupt downslope movement of a mass of soil or rock.

Limited utility extension – The extension of a utility service that is categorically exempt under RCW 43.21C for natural gas, electricity, telephone, water or sewer to service an existing use in compliance with this SMP and does not extend more than twenty-five hundred (2,500) linear feet within the shorelines of the state.

Littoral drift – The mud, sand, or gravel material moved parallel to the shoreline in the nearshore zone by waves and current.

Local utility – Public or private utilities normally servicing a neighborhood or defined subarea in the city, e.g., telephone exchanges; sanitary sewer; stormwater facilities; distribution lines; electrical distribution less than fifty-five (55) kilovolts; telephone; cable television, etc.

Marina – Any commercial or club-owned facility consisting of docks or piers serving five or more vessels or a shared moorage serving a subdivision, public park, or quasi-public recreation area serving 10 or more vessels.

May – The action is acceptable, provided it conforms to the provisions of this Program.

Mining – The removal of sand, gravel, soil, minerals, and other earth materials for commercial and other uses.

Mitigation Sequence –Mitigation in jurisdictional shoreline areas should be sequenced in the following order:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

Mitigation, in-kind – Replacement of shoreline resources, such as wetlands or surface water systems with substitute wetlands or surface water systems whose characteristics and functions and values closely approximate those destroyed or degraded by a regulated activity.

Mitigation, out-of-kind – Replacement of shoreline resources, such as surface water systems or wetlands with substitute surface water systems or wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity.

Mitigation plan – A plan that outlines the activities that will be undertaken to alleviate unavoidable project impacts. The plan generally contains: a site and project description; an environmental assessment of the functions and values of the site that will be impacted; a description of the proposed compensatory mitigation; the goals and objectives of the proposed mitigation; the performance standards against which success will be measured; monitoring of and reporting on the success of the mitigation; and a contingency plan in case of failure.

Mixed use– A combination of compatible uses within one development, in which both water-oriented and non-water-oriented uses are included.

Multiple use – A combination of compatible uses within one development, and may include commercial, multi-family, and recreation uses, among others.

Must – A mandate; the action is required.

Natural or **existing topography** – The topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling;

Nonconforming lot, **use**, or **structure** – A pre-existing parcel which was lawfully created prior to the effective date of this Program but does not meet minimum size or other dimensional requirements, a use which was legally established prior to the effective date of this Program, which would not be permitted as a new use in the area in which it is located under the terms of this Program, or a structure lawfully erected prior to the effective date of this Program or a site altered or improved which does not meet current standards for setbacks, buffers, vegetation conservation, landscaping, public access, screening, or other regulations for the area in which it is located due to changes in regulations since its establishment.

No net loss of ecological functions – The maintenance of existing ecological processes and functions.

1. No net loss of ecological functions on the level of the City - that the ecological processes and functions are maintained within a watershed or other functional catchment area. Regulations may result in localized cumulative impacts or loss of some localized ecological processes and functions, as long as the ecological processes and functions of the system are maintained. Maintenance of system ecological processes and functions may require compensating measures that offset localized degradation.

2. On a project basis - that permitted use or alteration of a site will not result in on-site or off-site deterioration of the existing condition of ecological functions that existed prior to initiation of use or alterations as a direct or indirect result of the project.

3. No net loss is achieved both through avoidance and minimization of adverse impacts as well as compensation for impacts that cannot be avoided. Compensation may include on-site or off-site mitigation of ecological functions to compensate for localized degradation.

Non-water-dependent use – Those uses which are not dependent on a waterfront location.

Non-water-oriented use – Those uses which are not water-dependent, water-related, or water-enjoyment.

Noxious weeds – Any plant which, when established, is highly destructive, competitive, or difficult to control. Cowlitz County maintains a noxious weed list.

Open space – An area that is intended to provide light and air, view, use, or passage of persons or animals which is almost entirely unobstructed by buildings, paved areas, or other

human-made structures, and is designed or preserved for environmental, habitat, scenic, or recreational purposes.

Ordinary high water mark (OHWM) – That mark on all lakes, streams, and tidal water that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: Provided, that in any area where the OHWM cannot be found, the OHWM adjoining salt water shall be the line of mean higher high tide and the OHWM adjoining freshwater shall be the line of mean high water.

Over-water structure – A structure or other construction located waterward of OHWM or a structure or other construction erected on piling above the surface of the water, or upon a float.

Permit – Any shoreline substantial development, variance, conditional use permit, or revision authorized under the Act (RCW 90.58).

Pier – Docks and similar structures consisting of a fixed and/or floating platform extending from the shore over the water. This definition does not include overwater trails.

Pond – A naturally existing or artificially created body of standing water which exists on a year-round basis and occurs in a depression of land or expanded part of a stream.

Potentially hazardous substances – Hazardous materials as well as other materials if discharged or improperly disposed that may present a risk to water resources.

Priority habitat – A habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

1. Comparatively high fish or wildlife density;
2. Comparatively high fish or wildlife species diversity;
3. Fish spawning habitat;
4. Important wildlife habitat;
5. Important fish or wildlife seasonal range;
6. Important fish or wildlife movement corridor;
7. Rearing and foraging habitat;
8. Refugia habitat;
9. Limited availability;

10. High vulnerability to habitat alteration; or

11. Unique or dependent species.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife. A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.

Priority species – Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.

1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.

2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.

3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.

4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

Public access – Physical and/or visual approach to and along the shoreline available to the general public.

Public interest – The interest shared by the citizens of the state or community at large in the affairs of government, or some interest by which their rights or liabilities are affected including, but not limited to, an effect on public property or on health, safety, or general welfare resulting from a use or development (WAC 173-27-030(14)).

Qualified professional – A person with experience, education, and/or professional degrees and training pertaining to the critical area in question as described for each critical area below. Qualified professionals will also possess experience with performing site evaluations,

analyzing critical area functions and values, analyzing critical area impacts, and recommending critical area mitigation and restoration. The City shall require professionals to demonstrate the basis for qualifications and shall make final determination as to qualifications. Demonstration of qualifications may include, but not be limited to, professional certification(s) and/or recognition through publication of technical papers or journals. Qualified professionals for each critical area include:

1. Wetlands. Biologist or wetland ecologist who has a bachelor's degree in biological science, soil science, ecology, botany, environmental science or an equivalent degree from an accredited college or university, at least two years of experience under the supervision of a practicing wetland professional and has experience delineating wetlands, preparing wetland reports, conducting function assessments and developing and implementing mitigation plans.

2. Fish and Wildlife Habitat Areas. Biologist/wildlife biologist/stream ecologist/habitat ecologist who has a bachelor's degree in biological, wildlife and/or stream ecology science from an accredited college or university and has at least two years of experience under the supervision of a practicing professional biologist or ecologist.

3. Geologically Hazardous Areas.

    a. Geologist - a person who has a bachelor's degree in geologic sciences from an accredited college or university and at least five years of professional experience as described in WAC 308-15-040 and is licensed as a professional geologist in the State of Washington. The licensed geologist shall have demonstrated experience analyzing geologic hazards and preparing reports for the relevant type of hazard.

    b. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

    c. Engineering geologist - a licensed geologist in the State of Washington with a specialty license in engineering geology meeting the requirements of WAC 308-15-055. The licensed engineering geologist shall have demonstrated experience analyzing geologic hazards and preparing reports for the relevant type of hazard.

    d. Geotechnical engineer - a person who has a bachelor's degree in civil engineering from an accredited college or university and at least five years of experience as a practicing geotechnical engineer, and is a registered professional engineer in the State of Washington (meeting the requirements of RCW 18.43.040). The licensed engineer shall have demonstrated

experience conducting geotechnical investigations, analyzing geologic hazards, and preparing reports for the relevant type of hazard.

4. Critical Aquifer Recharge Areas. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15-057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

5. Frequently Flooded Areas.

    a. Hydrogeologist - a licensed geologist in the State of Washington with a specialty license in hydrogeology meeting the requirements of WAC 308-15057. The licensed hydrogeologist shall have demonstrated experience analyzing hydrogeologic hazards and preparing reports for the relevant type of hazard.

    b. Fluvial geomorphologist - a person who has a bachelor's degree in earth sciences from an accredited college or university with applicable course work in fluvial geomorphology and at least five years of professional experience in fluvial geomorphology.

    c. Hydraulics engineer - a person who has a bachelor's degree in civil engineering from an accredited college or university and at least five years of experience as a practicing hydraulics engineer, and is a registered professional engineer in the State of Washington (meeting the requirements of RCW 18.43.040). The licensed engineer shall have demonstrated experience conducting, analyzing and preparing reports for hydraulic investigations.

Recreation areas or **facilities** – Any privately or publicly owned passive or active facility that provides for activities undertaken for pleasure or relaxation and for the refreshment of the mind and body that takes place in the outdoors or in a facility dedicated to the use including walking, fishing, photography, viewing, and bird-watching and may include parks, playgrounds, sports fields, paths and trails, beaches, or other recreation areas or facilities.

Restore, **restoration**, or **ecological restoration** – The reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.

Residential – Buildings, structures or portions thereof that are designed and used as a place for human habitation. Included are single, duplex or multi-family dwellings, manufactured homes, and other structures that serve to house people, as well as the creation of new residential lots through land division. This definition includes accessory uses common to

normal residential use, including but not limited to, residential appurtenances, accessory dwelling units, and home occupations.

Right-of-way – Land or easements dedicated for public roads, railways, public utilities, public levees, and public dikes.

Riparian zone – The upland area immediately adjacent to and paralleling a body of water and is usually composed of trees, shrubs and other plants. Riparian functions include bank and channel stability, sustaining water supply, providing flood storage, retainment of woody debris, leaf litter, nutrients, sediment and pollutant filtering, while providing shade, shelter and other functions that are important to the survival of both fish and wildlife.

SEPA – The Washington State Environmental Policy Act, Chapter 43.21C RCW.

Shall – A mandate; the action must be done.

Shared or **joint-use moorage** – Interchangeable terms in this Program. These terms mean moorage constructed and utilized by more than one waterfront property owner or by a homeowner's association that owns waterfront property. Shared moorage includes moorage for pleasure craft and/or landing for water sports for use in common by shoreline residents or for use by patrons of a public park or quasi-public recreation area, including rental of non-powered craft. If a shared moorage provides moorage for more than ten slips, then it is a marina.

Shorelands or **shoreland areas** – Those lands under the jurisdiction of the Shoreline Management Act extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the OHWM; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters that are subject to the provisions of the Shoreline Management Act (RCW 90.58.030); the same to be designated as to location by the Washington Department of Ecology.

Shorelines – All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes.

Shoreline areas and **shoreline jurisdiction** – All "shorelines of the state" and "shorelands" as defined in RCW 90.58.030.

Shorelines Hearings Board (SHB), State – A quasi-judicial body established at the State level by the Act to hear appeals by any aggrieved party on the issuance of an SSDP, conditional uses, variance or, enforcement penalties. See RCW 90.58.170 and RCW 90.58.180.

Shoreline master program – The comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. As provided in RCW 36.70A.480, the goals and policies of a shoreline master program approved under RCW 90.58 shall be considered an element of the City of Kelso's Comprehensive Plan. All other portions of this Program adopted under RCW 90.58, including use regulations, shall be considered a part of the City of Kelso development regulations.

Shoreline modifications – Those actions that modify the physical configuration or qualities of the shoreline area, usually undertaken in support of or in preparation for a shoreline use, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals.

Shoreline stabilization – Structural and non-structural methods to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as currents, floods, tides, wind, or wave action. Non-structural methods include building setbacks, relocation of structures, groundwater management, and planning and regulatory measures to avoid the need for structural shoreline stabilization. "Hard" structural stabilization measures refer to those with solid, hard surfaces such as concrete bulkheads, while "soft" structural measures rely on less rigid materials such as biotechnical vegetation measures or beach enhancement.

Shorelines of the state – The total of all "shorelines" and "shorelines of statewide significance" within the state.

Shorelines of statewide significance – With respect to the City of Kelso, shorelines of statewide significance are identified as the Columbia River and Cowlitz River (see RCW 90.58.030(2)(f)).

Should – That the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and the provisions of the Kelso Shoreline Master Program, against taking the action.

Significant vegetation removal – The removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

Site – Any parcel or combination of contiguous parcels, or right-of-way, or combination of contiguous rights-of-way under the applicant's ownership or control where the proposed project occurs.

Slope – An inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance. In these regulations, slopes are generally expressed as a percentage; percentage of slope refers to a given rise in elevation over a given run in distance. Slopes 15 to 30 percent constitute areas of geologic concern. Slopes greater than 30 percent constitute potential areas of geological hazard.

Snag – Any dead, partially dead, or defective (cull) tree at least 10 feet tall and 12 inches in diameter at breast height.

Snag-rich areas – Areas that are characterized by the presence of relatively high numbers of large diameter (greater than 20 inches dbh) snags, in varying states of decay, suitable for use by broad and diverse groups of wildlife. Snag-rich areas include naturally regenerated (unmanaged) forests, riparian areas, and burned, damaged or diseased forests. Snag-rich areas may also include individual snags or small groups of snags of exceptional value to wildlife due to their scarcity or location in particular landscapes.

Soil with severe erosion hazard – Any soil type having a degree of hazard or limitation of severe or very severe according to Table 3 of the Soil Survey of Cowlitz County Area, Washington, issued February 1974 by the U.S. Department of Agriculture, Soil Conservation Service.

Structure – A permanent or temporary edifice or building or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels (WAC 173-27-030(15)).

Substantial development, shoreline – Any development of which the total cost or fair market value exceeds seven thousand forty-seven dollars ($7,047), or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this definition must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period.

Substantially degrade – To cause significant ecological impact.

Surface water – Water that flows across the land surface, in channels, or is contained in depressions in the land surface, including but not limited to ponds, lakes, rivers, and streams.

Talus slope – A slope formed by the accumulation of rock debris at the bottom of steep slopes or cliffs.

Transmittal – *Transmit* means to send from one person or place to another by mail or hand delivery. The date of transmittal for mailed items is the date that the document is certified for mailing or, for hand-delivered items, is the date of receipt at the destination.

Upland – Generally described as the dry land area above and landward of the OHWM.

Utilities – Services and facilities that produce, convey, store, or process power, water, wastewater, stormwater, gas, communications, oil, and the like. On-site utility features serving a primary use, such as water, sewer, or gas line to a residence, are "accessory utilities" and shall be considered a part of the primary use.

Utility line – Pipe, conduit, cable or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include, but are not limited to, water supply, electric power, natural gas, communications, and sanitary sewer.

Variance, shoreline – A means to grant relief from the specific bulk, dimensional or performance standards set forth in this Program and not a means to vary a use of a shoreline.

Vessel – Includes ships, boats, barges, or any other floating craft which are designed and used for navigation and do not interfere with the normal public use of the water (WAC 17327).

View corridor – Portion of a viewshed, often between structures or along thoroughfares. View corridors may or may not be specifically identified and reserved through development regulations for the purpose of retaining the ability of the public to see a particular object (such as a mountain or body of water) or a landscape within a context that fosters appreciation of its aesthetic value.

Water-dependent use – A use or portion of a use which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include, but are not limited to, the following: ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, boating facilities, private moorage facilities, aquaculture, float plane facilities, sewer outfalls, hydroelectric generating plants and water diversion facilities, such as agricultural pumphouses.

Water-enjoyment use – A recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use, or a use that provides for enjoyment or recreational use of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the visual and physical qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment.

Water-oriented use – A use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses.

Water quality – The physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this Chapter, the term "water quantity" refers only to development and uses regulated under this Chapter and affecting water quantity, such as

impermeable surfaces and storm water handling practices. Water quantity, for purposes of this Chapter, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

Water-related use – A use or portion of a use which is not intrinsically dependent on a waterfront location, but its economic viability is dependent upon a waterfront location because:

1. The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or

2. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient.

Weir – A structure in a stream or river for measuring or regulating stream flow.

Wetlands or **wetland areas** – Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. For identifying and delineating a wetland, the methodology shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements as provided in RCW 90.58.380 and WAC 173-22-035.

This page intentionally left blank.

3. Applicability, Exemptions, and Prohibited and Nonconforming Uses

3.1 Applicability

All new or expanded uses and development within shoreline jurisdiction shall be carried out in a manner consistent with this Program and the policy of the Act as required by RCW 90.58.140(1), regardless of whether a SLE, SSDP, Variance, or SCUP is required. Unless described otherwise, this Program does not apply to the continuance of legally established and permitted uses and developments.

A. This Program shall apply to all of the shorelands and waters within the City of Kelso that fall under the jurisdiction of RCW 90.58. Such shorelands shall include those lands extending two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark (OHWM), floodways and contiguous floodplain areas landward two hundred feet from such floodways, associated wetlands, river deltas associated with the streams that are subject to the provisions of this program, as may be amended; the same to be designated as to location by Ecology, as defined by RCW 90.58.

1. Within the City of Kelso the following waters are considered “shorelines” and are subject to the provisions of this Program: Columbia River, Cowlitz River, Coweeman River, and Owl Creek. A copy of the Kelso Shoreline Environment Designations Map is shown in Appendix B.

2. The provisions of this Program shall not apply to developments specified in WAC 173-27-044, Developments not required to obtain shoreline permits or local reviews and WAC 173-27-045, Developments Not Subject to the Shoreline Management Act.

B. All shoreline uses and development activities outside of the city limits are subject to the provisions of the Cowlitz County Shoreline Master Program. Upon annexation, the City will continue to apply the shoreline designation and applicable standards of the County’s Shoreline Master Program until such time that the City Master Program is amended to include the annexed property.

C. Maps indicating the extent of shoreline jurisdiction and shoreline environment designations are for guidance only. They are to be used in conjunction with the most current, accurate, and complete scientific and technical information available, field investigations, and on-site surveys to accurately establish the location and extent of shoreline jurisdiction when a project is proposed. All areas meeting the definition of a shoreline or a shoreline of statewide significance, whether mapped or not, are subject to the provisions of this Program.

D. This Program shall apply to every person, individual, firm, partnership, association, organization, corporation, local or state governmental agency, public or municipal corporation, or other non-federal entity that develops, owns, leases, or administers lands, wetlands, or waters that fall under the jurisdiction of the Act; and within the external boundaries of federally owned lands.

E. Non-federal agency actions undertaken on federal lands must comply with this Program and the Act.

F. Native American Tribes' actions on tribal lands and federal agencies' actions on federal lands are not required, but are encouraged, to comply with the provisions of this Program and the Act. Nothing in this Chapter shall affect any rights established by treaty to which the United States is a party.

G. Hazardous substance remedial actions pursuant to a consent decree, order, or agreed order issued under RCW 70.105(D) are exempt from all procedural requirements of this Program.

H. Applicants that are responding to an emergency related to drought conditions or issuance of a drought order that requires a water withdrawal or facility shall be provided an expedited permit decision from the City, no longer than fifteen (15) calendar days after the date of application in accordance with RCW 90.58.370.

I. Certain forest practices that are not regulated by the Act and are regulated under RCW 76.09 are not subject to additional requirements of this Program.

J. The administrative regulations of this Program are superseded in authority by the terms and provisions of an environmental excellence program or agreement entered into under RCW 43.21(K), Environmental Excellence Program. The environmental excellence agreement must meet the substantive requirements of this Program. An environmental excellence program agreement must achieve more effective or efficient environmental results than the results that would be otherwise achieved.

K. Unless specifically exempted by statute, all proposed uses and development occurring within shoreline jurisdiction must conform to Chapter 90.58 RCW, the Shoreline Management Act and this Program whether or not a permit is required.

3.2 Exemptions from a Shoreline Substantial Development Permit

A. Substantial development as defined by this program and RCW 90.58.030 requires approval from the City through a Shoreline Substantial Development Permit (SSDP) (See Chapter 8 for permit review and approval procedures), except that:

1. An SSDP is not required for projects that meet the terms established in WAC 173-27-040(2), Developments Exempt from Substantial Development Permit Requirement (See Appendix E).

2. An SSDP is not required for those actions described in WAC 173-27-045, Developments Not Subject to the Shoreline Management Act (See Appendix E).

B. Any person claiming exemption from the permit requirements of this Program as a result of the exemptions specified in this Section shall make application for a Shoreline Letter of Exemption (SLE) as described in Chapter 8.

C. If any part of a proposed development is not eligible for exemption, then a shoreline permit is required for the entire proposed development project.

D. Any development which occurs within the regulated shorelines of the state, whether it requires a permit or not, must be consistent with the intent of the Act and this Program.

3.3 Nonconforming Uses, Structures, and Development

A. Existing uses, structures, and lots legally established prior to the effective date of this Program are allowed to continue. Where lawful uses, structures, and lots exist that could not be established under the terms of this Program, such uses, structures, and lots are deemed nonconforming and are subject to the provisions of this Section, unless specific exceptions are provided for in this Section.

B. Uses and developments landward of a levee, dike, revetment, road, railway, or right-of-way that were legally established in conformance with the provisions of the Kelso Comprehensive Plan and Development Regulations prior to the effective date of this Master Program shall be considered legal conforming uses and developments under this Program.

C. A structure for which a variance has been issued shall be considered a legal nonconforming structure and the requirements of this Section shall apply as they apply to preexisting nonconformities.

D. A structure which is being or has been used for a nonconforming use within the past twelve (12) months may be used for a different nonconforming use only upon the approval of a new conditional use permit and demonstration of the following criteria:

1. No reasonable alternative conforming use is practical; and

2. The proposed use will be at least as consistent with the policies and provisions of the Act and this Program and as compatible with the uses in the area as the preexisting use.

In addition, such conditions may be attached to the permit as are deemed necessary to assure compliance with the above findings, the requirements of this Program and the Act, and to assure that the use will not become a nuisance or a hazard.

E. If a nonconforming development is damaged to an extent not exceeding seventy five percent of the replacement cost of the original development, it may be reconstructed to those configurations existing immediately prior to the time the development was damaged, provided that application is made for the permits necessary to restore the development within one (1) year of the date the damage occurred, all permits are obtained and the restoration is completed within two (2) years of permit issuance or the conclusion of any appeal on the permit.

F. If a nonconforming use is discontinued for twelve (12) consecutive months or for twelve (12) months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming. A use authorized pursuant to Subsection D of this Section shall be considered a conforming use for purposes of this Section.

G. An undeveloped lot, tract, parcel, site, or division of land located landward of the OHWM which was established in accordance with City and state subdivision requirements prior to the effective date of the Act or this Program, but which does not conform to the present lot size standards, may be developed if permitted by other land use regulations of the City and so long as such development conforms to all other requirements of this Program and the Act.

H. Vegetation conservation standards of this Program shall not apply retroactively in a way which requires lawfully existing uses and developments, including residential landscaping and gardens, to be removed except as required as mitigation for new and expanded development.

I. Notwithstanding Sections 3.3.A through 3.3.H, the following shall apply only to preexisting legal residential structures constructed prior to the effective date of this Program:

    1. Residential structures and appurtenant structures that were legally established and are used for a conforming use, but that do not meet standards for the following, shall be considered a conforming structure: Setback, buffers, or yards; area; bulk; height; or density.

    2. The City may allow redevelopment, expansion, or a change of class of occupancy for residential structures that are consistent with underlying zoning, the SMP, including requirements for no net loss of shoreline ecological functions and maximum height, and that do not intrude farther into a required buffer.

    3. Pre-existing legal residential structures that are damaged or destroyed may be replaced to their prior size and location provided:

        a. All other requirements of the City of Kelso Municipal Code and the Cowlitz County Health Department are satisfied; and

4. A complete application for a building permit shall be submitted within one (1) year of the act causing damage or destruction to the dwelling unit.

5. Nothing in this Section shall:

    a. Restrict the ability of this Program to limit development, expansion, or replacement of over-water structures located in hazardous areas, such as floodplains and geologically hazardous areas; or

    b. Affect the application of other federal, state, or City requirements to residential structures.

4. Shoreline Master Program Goals and Policies

4.1 General Shoreline Goals

4.1.1 Goal

Plan for and foster all reasonable and appropriate uses of shorelines in the City of Kelso. This should be done in a manner which will achieve an orderly balance of shoreline uses that improve the quality of the environment.

4.1.2 Policies

A. Require that all new or expanded uses and new or expanded developments are as compatible as possible with the site, the surrounding area, and the environment, provide restoration as appropriate, and do not result in a net loss of shoreline ecological functions.

B. Water-dependent and associated water-related uses are the highest priority for shorelines.

C. Water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives are the second highest priority.

D. Limit non-water-oriented uses to those locations where access to the water is not provided or where the non-water-oriented use contributes to the objectives of the Act in providing ecological restoration and public access.

E. Use of shoreline areas should consider optimal use for future generations by recognition of potential long term benefits to the public and discouragement of short term gain or convenience.

F. Provide a mechanism for tracking project review actions and periodically review the cumulative effect of actions taken within the shoreline to determine if the goal of no net loss of shoreline ecological functions is being met.

G. Provide site development performance standards and other appropriate criteria to guide the use and development of shorelines.

H. Allow multiple use of shoreline areas where integration of compatible uses or activities is feasible.

I. Provide flexibility for development, including non-water-oriented uses, within the shoreline in areas physically separated from the shoreline by another property or public right-of-way.

J. Respect and protect private property rights.

4.2 Historic, Cultural, Archaeological, and Educational Resources

4.2.1 Goal

Protect, preserve, and encourage restoration of those sites and areas on the shoreline which have significant historical, cultural, educational, or scientific value.

4.2.2 Policies

A. Continue to identify historic, cultural, and archaeological resources within the shoreline in cooperation with federal, state, local, and tribal agencies.

B. Preserve for the public benefit, with opportunity for appropriate public utilization, significant historic, scientific, and educational areas of the shoreline.

C. Provide that the review and construction of development permits includes professional assessment of historic, cultural, and archaeological resources, as appropriate, and that such resources are preserved or conserved in compliance with applicable laws.

D. Work with the public to increase awareness of the Act and the importance of protecting shorelines.

4.3 Conservation and Restoration

4.3.1 Goal

Protect, preserve, and encourage the restoration of shoreline areas and critical areas.

4.3.2 Policies

A. All development within shoreline jurisdiction should implement the following sequence of actions when addressing potential adverse effects on the ecological functions within shoreline jurisdiction in the listed order of priority:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

6. Monitoring the impact and the compensation project and take appropriate corrective measures.

B. Establish and maintain a regional wetland mitigation bank(s).

C. Identify, prioritize, and implement shoreline restoration projects in accordance with the provisions of the Program and supporting documents.

D. Shoreline landowners are encouraged to preserve and enhance native woody vegetation and native groundcovers to stabilize soils and provide habitat. When shoreline uses or modifications require a planting plan (i.e., uses or modifications that require a mitigation plan), maintaining native plant communities, replacing noxious weeds and avoiding installation of ornamental plants are preferred. Nonnative vegetation requiring use of fertilizers, herbicides/pesticides, or summer watering is discouraged.

4.4 Economic Development

4.4.1 Goal

Give priority to those industrial, commercial, and recreational uses and developments that are particularly dependent on their location on City of Kelso's shoreline.

4.4.2 Policies

A. Minimize the adverse effects of new commercial, industrial, and recreational development upon the physical environment and natural processes through careful siting and design and mitigation sequencing.

B. Provide effective flood protection for the City of Kelso.

4.5 Flood Prevention and Flood Damage Minimization

4.5.1 Goal

Minimize flood hazards to human life and to property while enhancing the ecological processes of the shoreline.

4.5.2 Policies

A. Manage flood protection through implementation of the City’s Comprehensive Plan, Comprehensive Stormwater Management Plan, stormwater regulations, and the regional flood hazard control plans for the Columbia, Cowlitz, and Coweeman Rivers in accordance with applicable local, state, and federal requirements.

B. Recognize that flood control works, such as levees, dikes, and revetments, are an existing and important feature to protect life and property in the City of Kelso and the region.

C. Where feasible, non-structural methods or integrated bioengineering/soft engineering approaches to protect, enhance, and restore shoreline ecological functions and processes and other shoreline resources should be encouraged as an alternative to structural flood control works.

D. Protect existing development from flood damage:

1. Maintain existing levee and pump systems to effectively reduce flood hazards in areas currently protected by such facilities.

2. Provide for maintenance dredging of the Cowlitz River and other streams affected by continuing deposition of Mt. St. Helens volcanic deposits to maintain flow capacity and control risk of flooding.

3. New structural flood hazard reduction measures should be avoided whenever possible in order to avoid reducing floodplain functions crucial to fish and wildlife species, bank stability, and water quality. When necessary, they should be consistent with an adopted comprehensive flood hazard management plan and accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes.

4. Long-term programs for flood hazard reduction should include measures to prevent or remove development in flood-prone areas, to manage storm water within the floodplain, and to maintain or restore river and stream systems' natural hydrological and geomorphological processes in addition to structural flood control measures such as levees.

5. Removal of gravel, as opposed to volcanic deposits, for flood management purposes should be avoided unless identified as a necessary part of an adopted flood hazard reduction plan and allowed only after a biological and hydraulic study shows that extraction has a long-term benefit to flood hazard reduction, and does not result in a net loss of ecological functions.

E. Reduce potential hazard to new development by reducing exposure to flood hazards to the extent feasible.

1. New development should be located outside of floodways and should avoid location in floodplains to the maximum extent feasible.

2. New development should be designed and located to preclude the need for flood control structures. New or expanded development or uses in the shoreline, including subdivision of land, that would likely require flood control structures within a stream, channel migration zone, or floodway should be prohibited.

3. Development should be prohibited in the channel migration zone if it would result in interference with the process of channel migration which may cause significant adverse impacts to property or public improvements and/or result in a net loss of ecological functions associated with the rivers and streams.

F. Support measures to restore floodplain and channel migration zone functions, including flood storage, off-channel habitat, associated wetlands, and buffers of native vegetation, through levee setbacks and similar programs, when feasible.

4.6 Public Access

4.6.1 Goal

Promote safe, convenient and diversified access to publicly owned shorelines of the City of Kelso that recognizes the rights of private property owners.

4.6.2 Policies

A. Public access should be provided in consideration of opportunities and constraints for physical and visual access, existing and planned future uses, as well as consideration of ecological functions and public safety.

B. Public access to and along the water's edge should be available throughout publicly owned shoreline areas, although direct physical access to the water's edge may be restricted to protect shoreline ecological values.

C. Future developments and redevelopments should not adversely affect existing public access and should provide new opportunities for the public to reach, touch, and enjoy the water's edge.

D. Seek to purchase, or otherwise make available to the public, shoreline properties if their value for public use merits such action.

E. Existing highway and railroad corridors along shorelines should accommodate public access to the shoreline and provide safe overcrossings to shoreline public access facilities when feasible.

F. Coordinate with local, state, and federal agencies so that shoreline access is consistent with the city and regional parks recreation, open space and trails plans.

G. Respect and protect the enjoyment of private rights in shoreline property when considering opportunities for public access.

H. It is the intent of the City to establish a public access fund within the City budget to support public access to shorelines.

4.7 Recreation

4.7.1 Goal

Provide additional opportunities for diverse forms of recreation for the public and for improving present facilities.

4.7.2 Policies

A. Shoreline recreation development is a priority and facilities should be located, designed, and operated in a manner consistent with the purpose of the environmental designation in which they are located and such that no net loss of shoreline ecological functions or ecosystem-wide processes result.

B. Water-oriented recreational uses are preferred, and the SMP should allow shoreline recreational development in order to provide access, use, and enjoyment of shorelines that does not displace water-dependent uses.

C. Continue to identify, obtain, preserve and/or protect areas with high values for recreation when feasible.

D. Permit recreational uses as part of private development where compatible with other uses and activities.

E. Provide a balanced choice of recreational opportunities including those requirements of the elderly and the physically challenged when feasible.

F. Cultivate innovative and cooperative techniques among public agencies and private persons or groups which increase and diversify recreation opportunities.

G. Allow compatible recreational uses including bicycle and foot paths in transportation and utility corridors where feasible.

H. Coordinate with local, state, and federal agencies so that shoreline recreational developments are consistent with the City and regional parks recreation, open space and trails plans.

I. In providing space for public recreation along the shorelines, give primary emphasis to providing for the local recreation needs for boating, kayaking, canoeing, swimming, bicycling, fishing, picnicking, and other activities benefiting from shoreline access, as well as retaining and expanding regional trail systems.

J. Develop recreational activity areas in a manner which complements commercial and residential uses and/or natural habitats.

K. Prioritize recreational development in coordination with the City of Kelso Comprehensive Plan.

4.8 Transportation

4.8.1 Goal

Develop safe, convenient, and diversified shoreline circulation systems to assure efficient movement of goods and people with minimum disruptions to the shoreline environment and minimum conflict between the different users.

4.8.2 Policies

A. Locate and design new major circulation systems well away from the shoreline, except for necessary crossings, whenever feasible.

B. Encourage existing corridors for transportation facilities along shorelines to better accommodate public access to the shoreline and provide safe overcrossings to shoreline public access facilities whenever feasible.

C. Encourage non-motorized vehicle access such as pedestrian and bicycle to shorelines.

D. Allow parking facilities within shoreline jurisdiction only to support an authorized use when locations outside of shoreline jurisdiction are not suitable or feasible or when located landward of a levee, dike, revetment, railway, or right-of-way.

4.9 Utilities and Essential Public Facilities

4.9.1 Goal

Provide utility and essential public services necessary to protect the public and safety in a cost effective and efficient manner.

4.9.2 Policies

A. All new utility facilities should be designed and located to assure no net loss of shoreline ecological functions, preserve the natural landscape, and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.

B. New utility processing and production facilities should not be located in shoreline areas unless it can be demonstrated that no other feasible option exists.

C. Utilities should be upgraded and maintained to ensure water quality standards will be met.

D. Utilities should be located in existing rights of way and corridors whenever possible.

E. Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, should be located outside of the shoreline area where feasible and when necessarily located within the shoreline area should assure no net loss of ecological functions.

F. Non-water-dependent essential public facilities or parts thereof should not be located in shoreline areas unless no other feasible alternative exists and should be designed and operated to assure that there is no net loss of ecological function in accordance with the mitigation sequencing provisions of this Program.

4.10 Shoreline Uses

4.10.1 Goal

Establish specific shoreline use standards in accordance with the provisions of the Washington State Shoreline Management Act, WAC 173-26, WAC 173-27, the Kelso Comprehensive Plan, the Kelso Municipal Code, and this Master Program.

4.10.2 Policies

A. Agriculture

1. New outdoor agricultural uses within shoreline jurisdiction should be prohibited.

2. Agricultural uses legally established prior to the effective date of this Master Program may be continued.

B. Aquaculture

1. New aquaculture uses within the Shoreline should be restricted to projects that support ecological restoration.

C. Boating Facilities

1. New or expanded boating facilities should be located at sites with suitable environmental conditions, shoreline configuration, access, and neighboring upland and aquatic uses.

2. Boating facilities that minimize the amount of shoreline modification, in-water structures, and overwater cover are preferred.

3. Joint use of boating facilities is encouraged.

D. Commercial

1. Priority should be given to water-dependent commercial uses within shoreline jurisdiction.

2. New commercial development that is not water-oriented should be discouraged in shoreline jurisdiction unless such development provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration, or if the site is physically separated from the shoreline by another property or public right-of-way.

E. Forest Practices

1. New forest practices within the Shoreline should be prohibited.

F. Industrial

1. Priority should be given to water-dependent industrial uses within shoreline jurisdiction.

2. New industrial development that is not water-oriented should be discouraged in shoreline jurisdiction unless such development provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration, or if the site is physically separated from the shoreline by another property or public right-of way.

G. Institutional

1. Priority should be given to water-oriented institutional uses within shoreline jurisdiction.

2. New or expanded institutional development that is not water-oriented should be prohibited in shoreline jurisdiction unless such development provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration, or if the site is physically separated from the shoreline by another property or public right-of-way.

3. Institutional uses that foster appreciation of shoreline historic, cultural, scientific, and educational resources are encouraged.

H. In-stream Structures

1. Ensure the location, design, construction and maintenance of in-stream structures give due consideration to the full range of public interests, ecological functions and processes, and environmental concerns.

2. Priority consideration should be given to non-structural and non-regulatory approaches as an alternative to the construction of new in-stream structures.

I. Mining

1. Mining activities should be sited, designed, operated and completed to result in no net loss of shoreline ecological functions and processes after final reclamation of the site.

2. Give preference to mining proposals that result in the creation, restoration or enhancement of habitat for priority species.

J. Residential

1. Recognize single-family uses as a preferred use when they can be developed without significant impact to ecological functions or displacement of water-dependent uses.

2. The design of residential uses should minimize the need for new shoreline stabilization.

3. New residential development in shoreline jurisdiction, comprising more than four (4) dwelling units, multi-unit residential development, and the subdivision of land into more than four (4) parcels should provide for public access to the shoreline consistent with this Program, when feasible.

4.11 Shoreline Modifications

4.11.1 Goal

Establish specific standards to limit and guide modifications to shoreline areas in accordance with the provisions of the Shoreline Management Act, WAC 173-26, the Kelso Comprehensive Plan, the Kelso Development Regulations, and the provisions of the Master Program.

4.11.2 Policies

A. General Policies

1. Allow shoreline modifications only where it can be demonstrated that the proposed activities are necessary to support or protect an allowed use or development.

2. The individual and cumulative effects of shoreline modification should not result in a net loss of ecological functions. Ecological impacts should be avoided and mitigated in accordance with the mitigation sequence of this Program.

3. Shoreline modifications should only be approved if they are appropriate to the specific type of shoreline and environmental conditions for which they are proposed.

4. As much as possible, the number and extent of shoreline modifications should be limited.

5. Ecological functions impaired by development activities should be enhanced and/or restored where feasible and appropriate while accommodating permitted uses. As shoreline modifications occur, the projects should incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes.

6. New structural shoreline modifications should be allowed only where demonstrated to be necessary to support or protect an allowed primary structure or legally existing shoreline use that is in danger of loss or substantial damage or where structural modifications are necessary for mitigation or enhancement purposes.

B. Shoreline Stabilization

1. Types of shoreline stabilization that have a lesser impact on ecological functions are preferred.

C. Breakwaters, Jetties, Rock Weirs, and Groins

1. May be permitted waterward of the OHWM only when necessary to support water-dependent uses, public access, shoreline stabilization, or to protect a publically owned flood control structure.

D. Piers and Docks

1. Moorage buoys are preferred over docks where appropriate to minimize shallow water impacts to shoreline resources.

2. Joint use docks are preferred over single-use docks to help reduce the number of over water structures.

3. Piers and docks should only be permitted when they are in support of a water-dependent use or for the public to gain access to shorelines of the state.

E. Fill and Excavation

1. Fills and excavation should be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes including channel migration in accordance with the provisions of WAC 173-26-231 (3)(c).

F. Dredging and Dredge Material Disposal

1. Dredging operations should conform to the operating standards specified on any federal and state permits required for such operations.

2. New development should be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.

3. The necessary and ongoing maintenance dredging of the Cowlitz River for flood control purposes, including actions by the U.S. Army Corps of Engineers, should be supported.

G. Shoreline Habitat and Ecological Enhancement

1. Facilitate the projects described within the Shoreline Restoration Plan (Appendix D).

2. Shoreline restoration and enhancement activities designed to restore shoreline ecological functions and processes and/or shoreline features should be targeted toward meeting the needs of sensitive and/or regionally important plant, fish, and wildlife species.

3. Shoreline restoration and enhancement activities should be designed to create or improve dynamic and sustainable ecosystems.

4. All shoreline restoration and enhancement projects should protect the integrity of adjacent natural resources including aquatic habitats and water quality.

5. Where possible, restoration and enhancement activities should be integrated and coordinated with other parallel natural resource management efforts.

5. Shoreline Environment Designations and Shorelines of Statewide Significance

5.1 Introduction

The intent of assigning shoreline environment designations to specific geographies is to encourage development that will enhance the present or desired character of the shoreline. To accomplish this, segments of shoreline are given a shoreline environment designation based on existing development patterns, natural capabilities and limitations, and the vision of the City of Kelso. The shoreline environment designations are intended to work in conjunction with the comprehensive plan and zoning.

Management policies are an integral part of the shoreline environment designations and are used for determining uses and activities that can be permitted in each shoreline environment designation.

Chapters 6 and 7 contain development regulations to specify how and where permitted development can take place within each shoreline environment designation and they govern height and setback.

5.2 Authority

Local governments are required in accordance with the provisions of the Shoreline Management Act Program to develop and assign a land use categorization system known as “shoreline environment designations” for shoreline areas as a basis for effective shoreline master programs.

The City of Kelso accounted for different shoreline conditions by assigning a shoreline environment designation to each distinct shoreline section in the City. The shoreline environment designations provide the framework for implementing shoreline policies and regulatory measures for environmental protection, use provisions, and other regulatory measures specific to each shoreline environment designation.

5.3 Shoreline Environment Designation Interpretation

A. Shoreline jurisdiction maps are approximate. The OHWM and resultant upland, lateral extent of shoreline jurisdiction will need to be determined on a site-specific basis at the time of application. Any areas within shoreline jurisdiction that are not mapped and/or designated due to minor mapping inaccuracies in the upland extent of shoreline jurisdiction are automatically assigned the category of the contiguous upland shoreline environment designation.

B. Areas that were not mapped in the shoreline jurisdiction or not known to meet the applicability criteria in Section 3.1, Applicability, shall be assigned an Urban Conservancy environment designation until the shoreline can be designated through a Program amendment.

C. Property shown in shoreline jurisdiction that does not meet the definitions of shoreline or shoreland found in RCW 90.58.030 or the applicability criteria in Section 3.1, Applicability, shall not be subject to the requirements of this Program.

D. Potentially associated wetlands shown on the Shoreline Environment Designation Map (Appendix B) must be delineated at the time of application. Those portions of delineated associated wetlands would receive the adjoining environment designation. In the case that there is more than one adjoining environment designation, the most restrictive designation should be assigned.

E. Boundaries indicated as approximately following lot, tract, or section lines shall be so construed. Boundaries indicated as approximately following roads or railways shall be respectively construed to follow the nearest right-of-way edge.

5.4 Shoreline Environment Designations

The City classification system consists of shoreline environment designations that are consistent with and implement the Act, the Program, and the City of Kelso Comprehensive Plan.

These environment designations have been assigned consistent with the corresponding criteria provided for each shoreline environment designation. In delineating shoreline environment designations, the City aims to ensure that existing shoreline ecological functions are protected with the proposed pattern and intensity of development. Such environment designations should be consistent with the policies for restoration of degraded shorelines. The shoreline environment designations are High-Intensity, Residential, Urban Conservancy, and Aquatic.

5.4.1 High-Intensity Environment

Purpose

The purpose of the High-Intensity environment designation is to provide for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and seeking to restore ecological functions in areas that have been previously degraded.

Management Policies

A. Priority should be given to water-dependent, water-related, and water-enjoyment uses in that order of preference. Non-water-oriented uses within the High-Intensity SED are appropriate on sites where there is no direct access to the shoreline

because of another property or a public-right-of way separating it from the shoreline.

B. Non-water-oriented uses on sites adjacent to the water should provide significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration in compliance with the provisions of this Program.

C. Where unavoidable impacts to ecological functions occur, appropriate mitigation should be provided in accordance with this Program to achieve no-net loss. Where applicable, development should include environmental cleanup and restoration of the shoreline in accordance with relevant state and federal law.

D. Visual and/or physical public access should be provided, where feasible.

E. Aesthetic objectives of this Program should be in character with high-intensity development and include height limits, screening, and other standards consistent with the primary purpose of accommodating high-intensity uses.

F. Full utilization of existing urban and extensively altered areas should be achieved before further expansion of intensive development is allowed.

Designation Criteria

The High-Intensity environment designation is given to shoreline areas within the City of Kelso if they currently support or are planned for high-intensity uses related to commercial, industrial or transportation.

5.4.2 Residential Environment

Purpose

The purpose of the Residential environment designation is to accommodate residential development and appurtenant structures, as well as public use, public access, and recreational uses that are consistent with this Program.

Management Policies

A. New residential development should take into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, the proximity to levees, dikes, revetments, roads, railways, required setbacks and minimum frontage width, and other public right-of-ways and comprehensive planning considerations.

B. Multi-family, multi-lot residential (greater than four [4] lots), and recreational developments should provide public access and joint use for community facilities in compliance with this Program.

C. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

D. New commercial development should be limited to water-oriented uses, as provided in this Program.

Designation Criteria

The Residential environment designation is assigned to shoreline areas in the City of Kelso if they are predominantly single-family or multi-family residential development or are planned and platted for residential development.

5.4.3 Urban Conservancy Environment

Purpose

The purpose of the Urban Conservancy environment designation is to protect and restore ecological functions of open space, floodplain, and other sensitive lands where they exist in urban and developed settings while allowing a variety of compatible uses including recreational areas, facilities, and utilities. Activities permitted in these areas are intended to have minimal adverse impacts upon the shoreline.

Management Policies

A. Primary allowed uses within this environment designation should preserve the relatively natural character of the area or promote preservation of open space, floodplain, or other sensitive lands where they exist in urban and developed settings either directly or over the long term.

B. Standards have been established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the Urban Conservancy environment designation.

C. Public access and public recreation objectives should be implemented whenever feasible but only when any resulting significant ecological impacts can be mitigated.

D. Water-oriented uses should be given priority over non-water-oriented uses. For shoreline areas adjacent to commercially navigable waters, water-dependent uses should be given highest priority.

Designation Criteria

The Urban Conservancy environment designation is assigned to shoreline areas where development could occur while maintaining or having the ability to restore ecological functions. These are shoreline areas that are not generally suitable for water-dependent uses within incorporated municipalities that display any of the following characteristics:

A. Suitability for water-related or water-enjoyment uses;

B. Open space, floodplain, or other sensitive areas that should not be more intensively developed;

C. Potential for ecological restoration;

D. Retention of ecological functions, even though partially developed; or

E. Potential for development that is compatible with ecological restoration.

5.4.4 Aquatic Environment

Purpose

The purpose of the Aquatic environment designation is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the OHWM.

Management Policies

A. Allow new overwater and in-water structures only for water-dependent uses, public access, or ecological restoration. In order to reduce the impacts, multiple use of overwater facilities should be encouraged, and the size of new overwater structures should be limited to the minimum necessary to support the structure's intended use.

B. All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

C. Uses that adversely impact the ecological functions of freshwater habitats should not be allowed, except where necessary to achieve the objectives of RCW 90.58.020.

D. New and maintenance dredging should be permitted in accordance with applicable local, state, and federal standards and the provisions of this Program.

E. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

F. The repair and maintenance of flood control features such as levees, dikes, and revetments shall be permitted in accordance with applicable local, state, and federal standards.

Designation Criteria

A. The Aquatic environment designation is applied to lands waterward of the OHWM.

5.5 Shorelines of Statewide Significance

The Act designated certain shoreline areas as Shorelines of Statewide Significance (SSWS). Because these shorelines are major resources from which all people in the state derive benefit, the City shall give preference to uses which favor long-range goals and support the overall public interest.

Within the City of Kelso, the Columbia River and the Cowlitz River are designated as SSWS. SSWS are of value to the entire state. In accordance with RCW 90.58.020, SSWS will be managed as follows:

A. Every project located on an SSWS shall demonstrate consistency with the following priorities, in order of preference, in all permit review, in addition to compliance with other criteria provided by this Program:

1. Recognize and protect the statewide interest over local interest.

    a. Solicit comments and opinions from groups and individuals representing statewide interests by circulating amendments to the Program, and any proposed amendments affecting SSWS, to state agencies, affected tribes, adjacent jurisdictions, citizen's advisory committees and local officials, and statewide interest groups.

    b. Recognize and take into account state agencies' policies, programs, and recommendations in developing and administering use regulations and in approving shoreline permits.

    c. Solicit comments, opinions, and advice from individuals with expertise in ecology and other scientific fields pertinent to shoreline management.

2. Preserve the natural character of the shoreline.

    a. Designate and administer shoreline environments and use regulations to minimize damage to the ecology and environment of the shoreline as a result of man-made intrusions on shorelines.

    b. Restore, enhance, and/or redevelop those areas where intensive development or uses already exist in order to reduce adverse impact on the environment and to accommodate future growth rather than allowing high-intensity uses to extend into low-intensity use or underdeveloped areas.

    c. Protect and preserve existing diversity of native vegetation and habitat values, wetlands, and riparian corridors associated with shoreline areas.

3. Support actions that result in long-term over short-term benefit.

a. Evaluate the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.

b. Protect resources and values of SWSS for future generations by modifying or prohibiting development that would irretrievably damage shoreline resources.

c. Actively promote aesthetic considerations when contemplating new development, redevelopment of existing facilities, or general enhancement of shoreline areas.

4. Protect the resources and ecological function of the shoreline.

   a. Minimize development activity that will interfere with the natural functioning of the shoreline ecosystem, including, but not limited to, stability, drainage, aesthetic values, and water quality.

   b. All shoreline development should be located, designed, constructed, and managed to avoid disturbance of and minimize adverse impacts to wildlife resources, including spawning, nesting, rearing, and habitat areas and migratory routes.

   c. Restrict or prohibit public access onto areas which cannot be maintained in a natural condition under human use.

   d. Shoreline materials including, but not limited to, bank substrate, soils, beach sands and gravel bars should be left undisturbed by shoreline development. Gravel mining should be severely limited in shoreline areas.

   e. Preserve environmentally sensitive wetlands for use as open space or buffers and encourage restoration of currently degraded wetland areas.

5. Increase public access to publicly owned areas of the shoreline.

   a. Retain and enhance public access to the shoreline including passive enjoyment, recreation, fishing, and other enjoyment of the shoreline and public waters consistent with the enjoyment of property rights of adjacent lands.

   b. Give priority to developing a system of linear access consisting of paths and trails along the shoreline areas, providing connections across current barriers.

   c. Provide multipurpose non-motorized trail facilities, in accordance with the provisions of the American's with Disabilities Act, wherever feasible.

6. Increase recreational opportunities for the public on the shoreline.

a. Plan for and encourage development of public facilities for water-oriented recreational use of the shoreline

6. General Shoreline Regulations

This Chapter describes general regulations which apply to all shorelines of the state that are located in the City of Kelso. Chapter 6 is used in conjunction with specific use and modification regulations found in Chapter 7.

6.1 No Net Loss of Ecological Function

A. All shoreline use and development, including preferred uses and uses that are exempt from permit requirements, shall be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological functions, in accordance with the mitigation sequencing provisions of this Program.

B. Shoreline ecological functions that shall be protected include, but are not limited to, fish and wildlife habitat, food web support, and water quality maintenance.

C. Shoreline processes that shall be protected include, but are not limited to, water flow; erosion and accretion; infiltration; groundwater recharge and discharge; sediment delivery, transport, and storage; large woody debris recruitment; organic matter input; nutrient and pathogen removal; and stream channel formation/maintenance.

D. In-water work shall be scheduled to protect biological productivity (including but not limited to fish runs, spawning, and benthic productivity). In-water work shall not occur in areas used for commercial fishing during a fishing season unless specifically addressed and mitigated for in the permit.

E. An application for any permit or approval shall demonstrate all reasonable efforts have been taken to provide sufficient mitigation such that the activity does not result in net loss of ecological functions. Mitigation shall occur in the following prioritized order:

1. Avoid the adverse impact altogether by not taking a certain action or parts of an action or by moving the action.

2. Minimize adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering or by taking affirmative steps to avoid or reduce adverse impacts.

3. Rectify the adverse impact by repairing, rehabilitating, or restoring the affected environment.

4. Reduce or eliminate the adverse impact over time by preservation and maintenance operations during the life of the action.

5. Compensate for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments. Preference shall be given to measures that replace the impacted functions on-site or in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans may be authorized.

6. Monitor the adverse impact and the compensation projects and take appropriate corrective measures.

F. Applicants for permits have the burden of proving that the proposed development is consistent with the criteria set forth in this Program and the Act, including demonstrating all reasonable efforts have been taken to provide sufficient mitigation such that the activity does not result in net loss of ecological functions.

6.2 Archaeological, Cultural, and Historic Resources

A. If historic, cultural, or archaeological sites or artifacts are discovered in the process of development, work shall be stopped immediately in accordance with the provisions of federal, state, and local laws, the site secured, and the find reported as soon as possible to the City. The property owner also shall notify the Washington State Department of Archaeology and Historic Preservation (DAHP) and affected tribes. The City may provide for a site investigation by a qualified professional and may provide for avoidance or conservation of the resources in coordination with appropriate agencies. All shoreline permits shall contain a special provision notifying permittees of this requirement. Failure to comply with this requirement shall be considered a violation of the shoreline permit and shall subject the permittee to legal action.

B. Prior to approval of development in an area of known or probable cultural resources, the City shall require a site assessment by a qualified professional archaeologist in coordination with affected tribes. Conditions of approval may require preservation or conservation of cultural resources as provided by applicable federal, state, and local statutes. All permits issued for development in areas known to be archaeologically significant shall provide for monitoring of any development activity for previously unidentified cultural resources.

6.3 Critical Areas Protection

Critical Areas Regulations that apply in shoreline jurisdiction are located in Appendix C.

6.3.1 Applicable Critical Areas

For purposes of this Program, the following critical areas, as defined in Appendix C, will be protected under this Program: Wetlands; Critical Aquifer Recharge Areas; Frequently Flooded Areas; Geologically Hazardous Areas; and Fish and Wildlife Habitat Conservation Areas.

6.3.2 General Provisions

A. Shoreline uses, activities, developments, and their associated structures and equipment shall be located, designed, and operated to protect the ecological processes and functions of critical areas.

B. New and expanded development proposals shall integrate protection of wetlands, fish and wildlife habitat, and flood hazard reduction with other stream management provisions to ensure no net loss of ecological functions.

C. Critical areas within the shoreline jurisdiction shall be regulated for any use, development, or activity as provided in accordance with this Program and Appendix C.

D. If provisions of Appendix C and other parts of this Program conflict, the provisions most protective of ecological resources shall apply, as determined by the City.

E. Unless otherwise stated, critical area buffers associated with jurisdictional shoreline areas shall be regulated in accordance with this Program and Appendix C.

F. All critical areas in the City of Kelso located in areas outside of the jurisdiction of the Shoreline Management Act shall be subject to the provisions of the Kelso Municipal Code and the Washington State Growth Management Act.

G. These provisions do not extend the shoreline jurisdiction beyond the limits specified in this Program as defined in Section 3.1, Applicability.

6.4 Flood Prevention and Flood Damage Minimization

This Program addresses flooding in two different ways. This section includes flood hazard reduction measures, including flood control works, intended to avoid increasing hazards and minimize damage. Appendix C includes flood hazard protections by reference to Chapter 18.12 of the Kelso Municipal Code.

A. Development or uses in floodplains shall avoid significantly or cumulatively increasing flood hazards and shall be consistent with applicable flood hazard regulations or management plans adopted pursuant to 86.12 RCW.

B. New residential, commercial, or industrial development and uses, including subdivision of land, within shoreline jurisdiction are prohibited if it would be reasonably foreseeable that the development or use would require new structural flood hazard reduction measures in the channel migration zone or floodway over the life of the development.

C. The following uses and activities may be authorized in floodways or channel migration zones when otherwise permitted by this Program:

1. Actions and development with a primary purpose of protecting or restoring ecological functions and ecosystem-wide processes.

2. Bridges, utility lines, public stormwater and wastewater facilities and their outfalls, and other public utility and transportation structures where no other feasible alternative exists or where the alternative would result in unreasonable and disproportionate costs. Where such structures are allowed, mitigation shall address impacted functions and processes in the affected shoreline.

3. Repair and maintenance of an existing legally established use, provided flood hazards to other uses are not increased and that the activity does not cause significant ecological impacts that cannot be mitigated.

4. Development where structures exist that prevent active channel movement and flooding.

5. Modifications or additions to an existing nonagricultural legal use provided that channel migration is not further limited and that the new development includes appropriate protection of ecological functions.

6. Measures to reduce shoreline erosion provided that it is demonstrated that the erosion rate exceeds that which would normally occur in a natural condition, that the measures do not interfere with fluvial hydrological and geomorphological processes normally acting in natural conditions, and that the measures include appropriate mitigation of impacts to ecological functions associated with the river or stream.

D. Removal of materials such as gravel sand, or other sediment, for flood management purposes shall be consistent with an adopted flood hazard reduction plan and is allowed only after a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution, except when the removal is part of a U.S. Army Corps of Engineers dredging activity.

E. Channel Migration Zones:

1. Channel migration zones must be evaluated on a site by site basis when required by the City.

2. The Channel Migration Zone Map is available for review at the City as either hard copy or computer-generated image. Applicants may submit a site-specific channel migration zone study if they believe these conditions do not exist on the subject property and the map is in error. The study must be prepared consistent with WAC 173-26-221(3)(b), and may include, but is not limited to, historic aerial photographs, topographic mapping, flooding records, and field verification. The study must be prepared by a licensed geologist or engineer with at least five years of applied experience in assessing fluvial geomorphic processes and channel response.

F. Flood Control Works:

1. New or expanded structural flood hazard reduction measures, such as dikes, levees, berms, and similar flood control structures, shall be consistent with flood hazard regulations or management plans adopted pursuant to RCW 86.12, provided the plan has been adopted after 1994 and approved by Ecology.

2. New or expanded structural flood hazard reduction measures shall be permitted only when it can be demonstrated by a scientific and engineering analysis that:

   a. They are necessary to protect existing development;

   b. Non-structural flood hazard reduction measures are infeasible;

   c. Appropriate vegetation conservation actions are undertaken consistent with Section 6.6, Vegetation Conservation; and

   d. Appropriate mitigation is provided consistent with Section 6.1.

3. New structural public flood hazard reduction measures, such as dikes and levees, shall dedicate and improve public access pathways consistent with Section 6.5 of the SMP.

4. To the maximum extent feasible, new or altered dikes and levees shall be designed to be:

   a. No greater than the minimum height required to protect adjacent lands from the predicted flood stage as identified in the applicable comprehensive flood control management plan or as required by the U.S. Army Corps of Engineers for dike certification.

   b. Placed landward of associated wetlands and designated fish and wildlife conservation area buffers identified in Table 4 of Appendix C of this SMP, except for actions that increase ecological functions, unless there is no other feasible alternative, as documented by a geotechnical analysis, to reduce flood hazard to existing development in which case all impacts will be mitigated as required in Section 6.1 and Appendix C.

c. Located and designed so as to protect and restore the natural character of the stream, avoid the disruption of channel integrity, and provide the maximum opportunity for natural floodway functions to take place including levee setbacks to allow for more natural functions of floodplains, channel migration zones, off-channel habitat, and associated wetlands directly interrelated and interdependent with the stream.

d. Planted with appropriate vegetation meeting the certification requirements while providing the greatest amount of ecological function possible.

5. A geotechnical or geofluvial report prepared by a qualified professional shall demonstrate that new or altered flood protection structures will not increase downstream flooding and will not adversely affect the integrity of downstream ecological functions including disruption of natural drainage flows and stormwater runoff.

G. Information Required. The City shall require the applicant to provide the following information as part of an application for development within a flood hazard area. The City may also request additional information listed in KMC Chapter 18.12, as incorporated by reference in Appendix C.

1. Flood hazard area characteristics up- and downstream or up- and downcurrent from the project area;

2. Existing shoreline stabilization and flood protection works within the area;

3. Physical, geological, and soil characteristics of the area;

4. Biological resources and predicted impact to fish, vegetation, and animal habitat associated with shoreline ecological systems;

5. Predicted impact upon adjacent area shore and hydraulic processes, adjacent properties, and shoreline and water uses; and

6. Analysis of alternative flood protection measures, both structural and nonstructural.

H. The levees in Kelso are owned and maintained by Cowlitz County Drainage Improvement District No. 1 (North Kelso) and Cowlitz County Consolidated Diking District No 3 (South Kelso). Both Districts are in the process of having their levees certified by the US Army Corps of Engineers and are participating in the FEMA PAL program for provisionally accepted levees. The PAL program requires the same standards of maintenance as fully certified levees. In the event that a levee or section of levee is not certified, the Diking District will continue to require the same standards of maintenance.

6.5 Public Access

Public access provisions apply to all shorelines of the state, if feasible, unless stated otherwise and are intended to protect the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations.

A. Applicability (also see Figure 6-1):

1. Public access shall be required in the following circumstances:

   a. The use or development is a public project; or

   b. The project is a water-enjoyment or non-water-oriented use or development; or

   c. The project is a residential development of more than four (4) dwelling units; or

   d. The project is a subdivision of land into more than four (4) parcels; or

   e. The project is a private water-dependent or water-related use or development and one of the following conditions exists:

      i. The project increases or creates demand for public access;

      ii. The project impacts or interferes with existing access by blocking access or discouraging use of existing access; or

      iii. The project impacts or interferes with public use of waters subject to the Public Trust Doctrine.

2. Public access to the shoreline shall not be required for the following:

   a. Activities qualifying for a Shoreline Letter of Exemption;

   b. New single-family residential development of four (4) or fewer units; or

   c. Reasonable, safe and convenient public access to the shoreline exists within one-quarter mile (1,320 feet) of the site.

3. Physical public access shall not be required where the new or expanded use or development would be physically separated from the shoreline by another property or public right-of-way.

4. The City may approve alternatives to on-site, physical access to the shoreline if the applicant can demonstrate with substantial evidence that at least one of the following conditions exist:

a. Unavoidable health or safety hazards to the public exist which cannot be prevented by any reasonable means;

b. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;

c. The cost of providing the access, easement, or an alternative amenity, is unreasonably disproportionate to the total long-term cost of the proposed development;

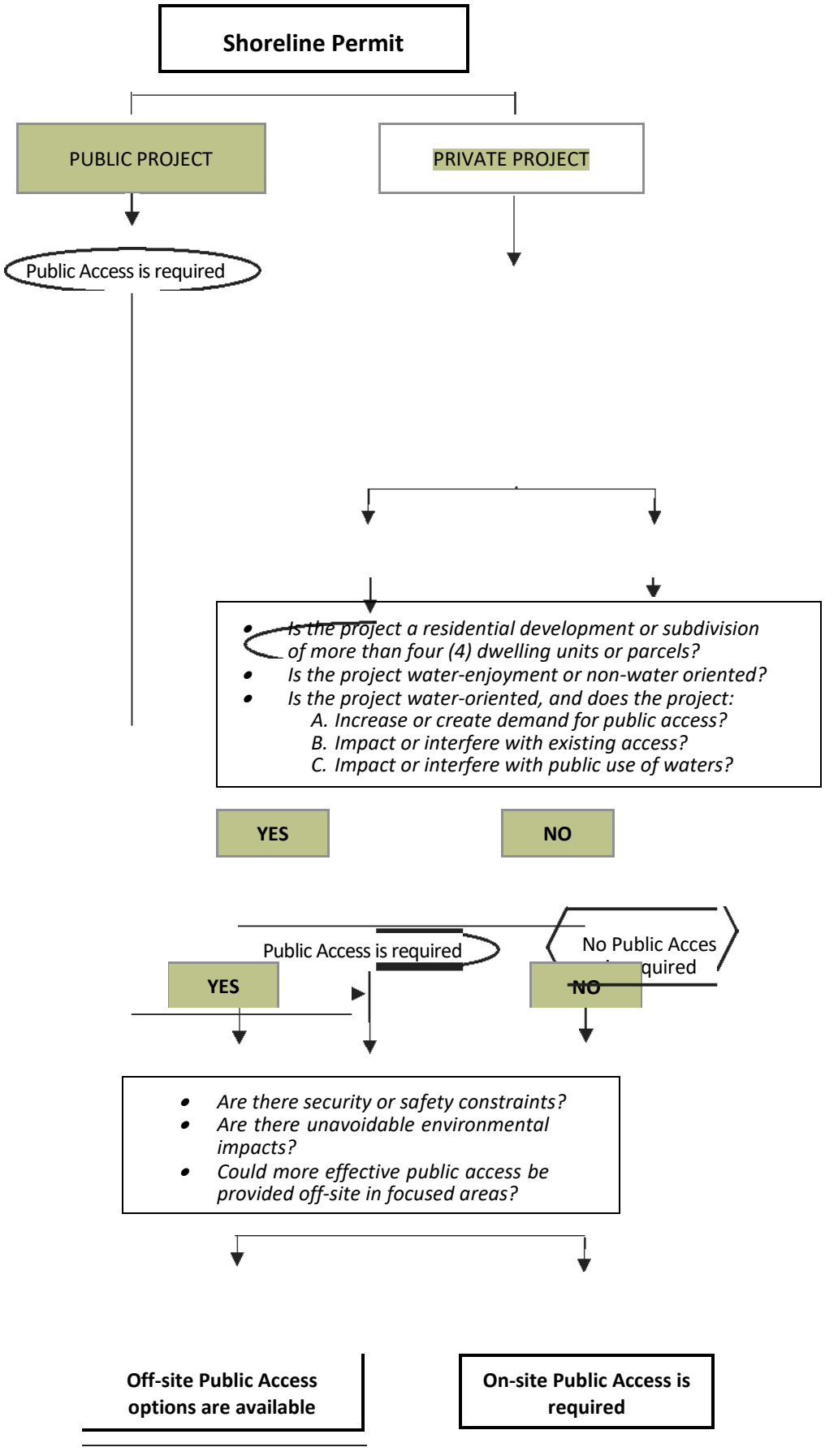
d. Environmental impacts that cannot be mitigated, such as damage to spawning areas or nesting areas, would result from public access on-site;

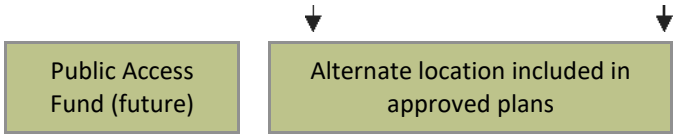
e. Significant undue and unavoidable conflict between access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated; and/or

f. More effective public access can be provided off-site by focusing public access improvements at sites within shoreline jurisdiction identified in the adopted Kelso Parks and Recreation Plan, the Cowlitz County Regional Trail Plan, and/or the Kelso Comprehensive Plan, and/or SMP Public Access Plan adopted in the future.

5. To be approved for alternative public access, the applicant shall demonstrate that all feasible alternatives have been considered, including, but not limited to, regulating access through allowed hours of use, maintaining access gate, and/or separating uses and activities with fences, terracing, hedges, etc.

Figure 6-1. Public Access Applicability




Public Access Fund (future)
Alternate location included in approved plans

B. Public Access Standards:

1. When public access is required and provided on-site, it shall be:

   a. Located and designed to be compatible with the natural shoreline character, to avoid adverse impacts to shoreline ecological functions, and to ensure public safety.

   b. Allowed to encroach into the shoreline buffer when necessary to provide physical and or visual access to the water's edge when otherwise consistent with this Program and Appendix C, Critical Areas Regulations.

   c. Connected to the nearest public street and shall include improvements that conform to the requirements of the ADA when feasible or required by law.

   d. Fully developed and available for public use prior to final occupancy when required for public land, commercial, port, or industrial use/development.

   e. Clearly identified by signage installed and maintained in easily visible locations indicating the public's right of access, hours of access, and other information as needed to control or limit access according to conditions of approval.

   f. Recorded by easement and permit conditions on the deed of title and/or the face of a short or long plat. Recordation shall occur at the time of final plat approval or prior to final occupancy.

   g. Consistent with all relevant constitutional and other legal limitations on regulation of private property.

2. Off-site or Alternative Public Access:

   a. When public access is provided off-site, its location, design, and access type shall be consistent with the applicable provisions in Section B.1 above and the City's adopted Parks and Recreation Plan, the Cowlitz County Regional Trail Plan, the Kelso Comprehensive Plan, and/or the Shoreline Public Access Plan adopted in the future.

   b. When public access is allowed off-site, an applicant may elect to make a payment into the jurisdiction's Shoreline Public Access Fund in lieu of developing the access directly, if such a fund has been established by the City.

3. Public access requirements for a single-family residential development of greater than four (4) parcels but less than ten (10) parcels can be met by providing community access to the shoreline or to a common waterfront lot/tract for non-commercial recreation use by the property owners and guests within the subdivision.

6.6 Vegetation Conservation

A. All development shall minimize vegetation removal in areas of shoreline jurisdiction to the amount necessary to accommodate the permitted use.

B. Unless otherwise specified, all shoreline uses and development shall comply with the setback and buffer provisions of this Program included in Table 7-1; Table 4, Appendix C; and Section 6.3, Critical Areas Protection, to protect and maintain shoreline vegetation.

C. Vegetation conservation standards of this Program shall not apply retroactively in a way which requires lawfully existing uses and developments, including residential landscaping and gardens, to be removed, except as required as mitigation for new and expanded development. Routine maintenance of existing landscaping and gardens is allowed.

D. Vegetation clearing in shoreline jurisdiction shall be limited to the minimum necessary to accommodate approved shoreline development and to comply with applicable local, state, and federal standards. Routine maintenance of existing landscaping and gardens is allowed.

E. Mitigation plans shall be approved before initiation of other permitted activities unless a phased schedule that ensures completion prior to occupancy has been approved.

F. Aquatic weed control shall only occur to protect native plant communities and associated habitats or where an existing water-dependent use is restricted by the presence of weeds. Aquatic weed control shall occur in compliance with all other applicable laws and standards and shall be done by a qualified expert.

   1. For more information, please refer to WDFW publication # APF-1-98, "Aquatic Plants and Fish," available online at http://wdfw.wa.gov/licensing/aquatic_plant_removal/.

G. Limbing or crown thinning shall comply with the Tree Care Industry Association pruning standards, unless the tree is a hazard tree as defined by this SMP. No more than 25 percent of the limbs of any single tree may be removed and no more than 20 percent of the canopy cover in any single stand of trees may be removed for view preservation.

H. Vegetation may be removed from levees, dikes, airports, roads, and railways in accordance with the provisions of this Program and applicable federal, state, and local standards, including but not limited to the requirements of the US Army Corps of Engineers, the Federal Aviation Administration, the Washington State Department of Transportation Aviation Division, and the City of Kelso.

I. Vegetation may be removed or altered landward of shoreline buffers described in this Program provided that there is no net loss of ecological function.

6.7 Water Quality and Quantity

A. All shoreline development shall comply with the applicable requirements of the City's Comprehensive Stormwater Management Plan, Comprehensive Plan, and best management practices to prevent impacts to water quality and stormwater quantity that would result in a net loss of shoreline ecological functions and/or a significant impact to aesthetic qualities or recreational opportunities.

B. Stormwater management structures including ponds, basins, and vaults shall be located outside of shoreline jurisdiction where possible, as far from the water's edge as feasible, and shall minimize disturbance of vegetation conservation buffers. Low-impact development facilities (which do not substantially change the character of the shoreline) such as vegetation filter strips, grass-lined swales, and vegetated bioretention and infiltration facilities, are encouraged in association with development allowed in shoreline jurisdiction.

C. Sewage management. To avoid water quality degradation, sewer service is subject to the requirements outlined below.

1. Any existing septic system or other on-site system that fails or malfunctions will be required to connect to an existing municipal sewer service system if feasible, or make system corrections approved by the Cowlitz County Environmental Health Unit.

2. Any new development, business, single-family or multi-family unit will be required to connect to an existing municipal sewer service system if feasible, or install an on-site septic system approved by Cowlitz County Environmental Health Unit.

7. Specific Shoreline Use and Modification Regulations

The regulations in this Chapter apply to specific uses and modifications within shoreline jurisdiction. In many circumstances, more than one Section of use or modification regulations will apply to a specific proposal. Guiding policies for uses and modifications are located in Chapter 4.

7.1 Shoreline Use, Modification, and Standards Tables

A. Table 7-1 Shoreline Use, Modification, Setbacks, and Heights, shall be used to determine which uses and modifications may be permitted (P), approved with conditions through the issuance of a Shoreline Conditional Use Permit (SCUP), or prohibited (X) in each shoreline environment designation.

B. All uses and development activities proposed for jurisdictional shoreline areas must comply with all provisions of the Kelso Municipal Code as determined by the City.

C. Setbacks shall be measured on a horizontal plane, perpendicular and landward from the required feature described in Table 7-1 below.

Table 7-1. Shoreline Use, Modification, Setbacks, and Heights

Table Key: P = May be permitted through an SSDP or SLE SCUP = May be permitted through an SCUP review X = Prohibited N/A = Not Applicable	Shoreline Environment Designations			
	High-Intensity	**Residential**	**Urban Conservancy**	**Aquatic**
Shoreline Uses				
Agriculture (1)	X	X	X	X
Aquaculture (2)	P	P	P	P
Boating Facilities (3)	**P**	**P**	**P**	**P**
Marinas	X	X	X	X
Residential Docks, Piers, and Launch Facilities	P	P	P	P
Commercial (4)				
Water-dependent	P	P	X	P
Water-related	P	P	X	X
Water-enjoyment	P	P	X	P
Non-water-oriented	P	X	X	X
Forest Practices (5)	X	X	X	X
Industrial (6)				
Water-dependent	P	X	X	P
Water-related	P	X	X	X

Table Key: P = May be permitted through an SSDP or SLE SCUP = May be permitted through an SCUP review X = Prohibited N/A = Not Applicable	Shoreline Environment Designations			
	High-Intensity	**Residential**	**Urban Conservancy**	**Aquatic**
Non-water-oriented	P	X	X	X
Institutional (7)	P	P	P	X
In-stream Structures (8)	P	P	P	P
Mining (9, 17, 19)	SCUP	SCUP	SCUP	SCUP
Recreation (10)				
Water-dependent	P	P	P	P
Water-related	P	P	P	P
Water-enjoyment	P	P	P	P
Non-water-oriented	P	P	X	X
Residential (11)				
Single-family	P	P	P	X
Multi-family	P	P	X	X
Floating or over-water residence, including live-aboard vessels	X	X	X	X
Transportation and Parking (12)				
Roads and railroads	P	P	P	P
Bridges	P	P	P	P
Non-motorized facilities	P	P	P	P
Accessory Parking	P	P,	P	X
Utilities (13)	P	P	P	P
Uses Not Specified	SCUP	SCUP	SCUP	SCUP
Modifications				
Shoreline Stabilization (14)	P	P	P	P
Breakwaters and Groins (15)	SCUP	SCUP	SCUP	SCUP
Fill / Excavation (16)	P	P	P	SCUP
Dredging (17)				
Dredging	N/A	N/A	N/A	SCUP
Dredge Disposal / Material Stockpiling	P	P	P	SCUP
Habitat / Ecological Enhancement (18)	P	P	P	P
Flood Control Works (20)				
Modification of Existing Flood Control Works (including relocation farther landward)	P	P	P	SCUP
New Flood Control Works	P	P	P	SCUP
Dimensional Standards				
Buffer (22)	See Table 4, Appendix C			
Building setback from Buffer or Landward Toe of Levee, Where Present as noted in Table 4, Appendix C	10 ft.	10 ft.	10 ft.	N/A
Maximum Height (21)	35 ft.	35 ft.	35 ft.	35 ft.

Table Key: P = May be permitted through an SSDP or SLE SCUP = May be permitted through an SCUP review X = Prohibited N/A = Not Applicable	Shoreline Environment Designations			
	High-Intensity	**Residential**	**Urban Conservancy**	**Aquatic**
Minimum River Frontage Per Lot	N/A	60 ft.	N/A	N/A

Table Notes:

(1) See Section 7.2.1 for more details.
(2) See Section 7.2.2 for more details.
(3) See Section 7.2.3 for more details.
(4) See Section 7.2.4 for more details.
(5) See Section 7.2.5 for more details.
(6) See Section 7.2.6 for more details.
(7) See Section 7.2.7 for more details.
(8) See Section 7.2.8 for more details.
(9) See Section 7.2.9 for more details.
(10) See Section 7.2.10 for more details.
(11) See Section 7.2.11 for more details.
(12) See Section 7.2.12 for more details.
(13) See Section 7.2.13 for more details.
(14) See Section 7.3.2 for more details.
(15) See Section 7.3.3 for more details. A Breakwater or groin for the purposes of restoration or ecological protection is a permitted use through an SSDP and does not require an SCUP.
(16) See Section 7.3.4 for more details.
(17) See Section 7.3.5 for more details.
(18) See Section 7.3.6 for more details.
(19) New mining activities proposed in channel migration zones located within jurisdictional shoreline areas may be approved only through a Shoreline Conditional Use Permit.
(20) See Section 6.4 for more details.
(21) Additional height may be approved in accordance with Section 7.2.6.G
(22) Uses and developments identified in Section 3.K of Appendix C, may locate within the buffers shown in Table 4, Appendix C and within the setbacks shown in Table 7-1. These uses must meet mitigation sequencing requirements to avoid, minimize, and mitigate for adverse impacts.

7.2 Shoreline Use

7.2.1 Agriculture

A. In accordance with RCW 90.58.065, this Program shall not restrict existing or ongoing agricultural activities occurring on agricultural lands.

B. New or expanded agriculture is a prohibited use activity within shoreline jurisdiction.

C. Preparatory work associated with the conversion of land to non-agriculture uses and/or developments shall be consistent with the policies and regulations for the proposed non-agriculture use and the general provisions of this Program, including vegetation conservation.

7.2.2 Aquaculture

A. New aquaculture uses may be permitted only in association with the restoration of native fish species in the Columbia, Cowlitz, and Coweeman Rivers.

B. Aquaculture is not allowed where it would result in a net loss of ecological functions, or significantly conflict with navigation or other water-dependent uses.

C. Non-commercial aquaculture undertaken for conservation or habitat restoration purposes is a preferred use within the City of Kelso's shorelines.

D. Aquaculture facilities shall not significantly impact the aesthetic qualities of the shoreline.

7.2.3 Boating Facilities

A. General Requirements for boating facilities except docks serving four (4) or fewer single family residences (See subsection D):

1. New and modified boating facilities shall meet Washington State Department of Natural Resources requirements and other state guidance if located in or over state-owned aquatic lands.

2. Boating facilities shall locate in areas where:

   a. There is adequate water mixing and flushing;

   b. The structure shall not block or obstruct lawfully existing or planned public shoreline access;

   c. Such facilities will not adversely affect flood channel capacity or otherwise create a flood hazard;

   d. Water depths are adequate to minimize new or maintenance dredging and other channel maintenance activities;

   e. The structure shall minimize the obstruction of currents, alteration of sediment transport, and the accumulation of drift logs and debris;

   f. New shoreline stabilization shall not be needed. Where the need for stabilization is unavoidable, only the minimum necessary shoreline stabilization to adequately protect facilities, users, and watercraft may be allowed; and

   g. Water depths are adequate to prevent floating structures from grounding out at the lowest low water or else stoppers are installed to prevent grounding out.

3. Boating facilities shall not be located:

a. Along braided or meandering river channels where the channel is subject to change in alignment;

b. On point bars or other accretion beaches;

c. Where existing in-water navigation uses would be impaired or obstructed.

4. Boating facilities shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials used for submerged portions, decking, and other components that may come into contact with water shall be approved by applicable state agencies for use in water.

5. Boating uses and facilities shall be located far enough from public swimming beaches, fishing, and other aquatic uses to avoid adverse impacts, safety concerns, and potential use conflicts.

6. Accessory uses at boating facilities shall be:

a. Limited to water-oriented uses, including uses that provide physical or visual shoreline access for the general public.

b. Located as far landward as possible while still serving their intended purposes.

7. Parking and storage areas shall be landscaped or screened to provide visual and noise buffering between adjacent dissimilar uses or scenic areas.

8. Lighting associated with overwater structures shall be beamed, hooded, or directed to avoid causing glare on adjacent properties or waterbodies. Illumination levels shall be the minimum necessary for safety.

9. When feasible boating facilities shall be designed to be aesthetically compatible with the surrounding shoreline environment, and where aesthetic impacts are unavoidable mitigation shall be provided.

10. Boating facilities shall locate where access roads are adequate to handle the traffic generated by the facility and shall be designed so that lawfully existing or planned public shoreline access is not obstructed.

11. New uses, developments, and activities accessory to boating facilities shall be located outside any applicable shoreline buffer unless at least one of the following is met:

a. Proximity to the water-dependent project elements is critical to the successful implementation of the facility's purpose, and the elements are supportive of the water-dependent use and have no other utility (e.g., a road to a boat launch facility);

b. The applicant's lot/site has topographical or other constraints where no other location of the development is feasible (e.g., the water-dependent use or activity is located on a parcel entirely or substantially encumbered by the required buffer).

In these circumstances, uses and modifications accessory to water-dependent boating facilities must be designed and located to minimize intrusion into the buffer, and any adverse impacts to ecological functions shall be mitigated.

B. Boat Launches

1. Launch ramps shall be designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available with consideration for site-specific conditions and the particular needs of that use.

2. There is no maximum length or width for boat launches; however, the proponent must demonstrate that the size proposed is the minimum necessary to allow the use proposed.

3. Non-motorized boat launches shall use gravel or other permeable material.

4. Additional standards for public boat launches are as follows:

   a. Public boat launches shall include adequate restroom and sewage and solid waste disposal facilities in compliance with applicable health regulations.

   b. When overwater development is proposed in association with a public boat launch facility, it may be permitted only where such use requires direct water access and/or where such facilities will substantially increase public opportunities for water access.

   c. Public boat launches shall be located and designed to prevent traffic hazards and to minimize traffic impacts on nearby access streets.

   d. Public boat launch sites shall include parking spaces for boat trailers commensurate with projected demand.

C. Docks

1. New piers and docks shall be allowed only for water-dependent uses or public access.

2. New dock construction, excluding docks accessory to single-family residences (regulated under Subsection D of this Section), shall be permitted only when the applicant has demonstrated that a specific need exists to support the intended primary water-dependent use. The applicant shall demonstrate need by providing a needs analysis or comprehensive master plan projecting future

needs for dock or moorage space for approval. If approved by the City, the document may serve as the necessary justification for design, size, and construction to the extent that the plans are consistent with this Program.

3. Extended moorage on waters of the state requires a lease or permission from the Washington state Department of Natural Resources.

D. This Section applies to docks, buoys, and boat launches that are accessory to four (4) or fewer single-family residences. A dock associated with a single-family residence is considered a water-dependent use if it is designed and intended for access to watercraft and complies with the requirements of this Program.

1. A new moorage structure (dock or buoy) to serve a single-family residence may be allowed only when the lot does not have access to a shared structure and there is no homeowners association or other corporate entity capable of developing shared structure.

2. Prior to approval a new residential dock, an applicant shall demonstrate that a mooring buoy is not feasible to provide moorage.

3. When feasible, new residential development of two or more dwellings with new accessory docks shall provide joint use or community dock facilities to reduce ecological impacts of new overwater facilities.

4. Docks shall meet the following standards:

   a. Docks shall be restricted to the minimum size necessary to meet the needs of the proposed water-dependent use. The length of docks accessory to residential use/development shall be no greater than that required for safety and practicality for the residential use. The maximum length for residential docks shall be limited to either sixty (60) feet as measured horizontally from the OHWM, or the length necessary to provide a minimum of six (6) feet of water depth. The maximum width for residential docks shall be limited to six (6) feet. The dimensional standards may be adjusted as required by local, state and federal agencies, however adjustments exceeding these maximums require a variance.

   b. New or expanded covered moorage is prohibited.

   c. Residential moorage facilities shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials used for submerged portions, decking, and other components that may come into contact with water shall be approved by applicable state agencies for use in water.

d. Floats shall be constructed and attached so that they do not ground out on the substrate. Float stops, tubs, or similar structures may be used. A minimum of one (1) foot of elevation above the substrate is required.

e. Pile spacing shall be the maximum feasible to minimize shading and avoid a "wall" effect that would block or baffle wave patterns, currents, littoral drift, or movement of aquatic life forms, or result in structure damage from driftwood impact or entrapment, except as may be necessary to protect the public health and safety and comply with other provisions of this Program, as determined by the City.

f. Piling diameter shall be sized to use the minimum possible while meeting the structural requirements of expected loads.

g. Grating, or clear translucent material, shall cover the surface area of the pier and ramp waterward of the OHWM and all portions of float(s) not underlain by float tubs or other material that provides buoyancy. The open area of grating shall have a minimum of sixty percent (60 percent) open space, or as otherwise required by state or federal agencies during permit review, unless determined to be infeasible due to specific site or project considerations. Clear translucent material shall have greater than ninety percent (90 percent) light transmittance as rated by the manufacturer. For guidance on docks, see:

- WAC 220-110-060
- http://wdfw.wa.gov/publications/00052/
- Other documents available at http://wdfw.wa.gov/conservation/habitat/planning/ahg/

h. Docks shall be set back a minimum of ten (10) feet from side property lines, except that joint-use facilities may be located closer to, or upon, a side property line when agreed to by contract or covenant with the owners of the affected properties. This agreement shall be recorded in a format(s) prescribed by the City and a copy filed with the shoreline permit application.

5. Unavoidable impacts from new or expanded private boat moorage or launch construction pursuant to this Section shall be minimized and mitigated consistent with the requirements of this Program.

6. Moorage or launch structures shall not be allowed in freshwater aquatic habitats unless it can be established that the structure, including auxiliary impacts and established mitigation measures, will not be detrimental to the natural habitat or species of concern, and complies with the mitigation sequencing provisions of this Program.

7.2.4 Commercial

A. Water-dependent commercial uses are preferred over non-water-dependent commercial uses. Water-related and Water enjoyment use are preferred over non-water-oriented uses.

B. Non-water-dependent commercial uses shall not be allowed if they displace existing viable water-dependent uses or if they are proposed to occupy space designated for water-dependent uses identified in a previously approved SSDP or SLE.

C. New or expanded non-water-oriented commercial development may be allowed only when:

1. It is part of a mixed-use project including water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration; or

2. Navigability is severely limited at the site and the development provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration; or

3. The site is physically separated from the shoreline by another property or public right-of-way.

D. Commercial uses shall provide a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration where feasible, in compliance with Section 6.5 of this SMP, and shall avoid impacts to existing navigation, recreation and existing public access.

E. Overwater structures, or other structures waterward of the OHWM, are allowed only for those portions of water-dependent commercial uses that require overwater facilities as an essential feature of their function or for public access facilities. Design of overwater structures or structures beyond the OHWM shall demonstrate that they will not interfere with normal stream geomorphic processes, require additional future shoreline stabilization, and interfere with navigation or normal public use of the water.

F. Commercial uses that may be authorized as water-related or water-enjoyment commercial uses are required to incorporate appropriate design and operational elements so that they meet the definition of water-related or water-enjoyment uses.

7.2.5 Forest Practices

A. Due to the lack of timber harvest potential within the City's shoreline jurisdiction, forest practices activities are not applicable to the City of Kelso, and are prohibited.

B. Forestry practices for preparatory work associated with the conversion of land to non-forestry uses and/or developments shall be consistent with the policies and regulations for the proposed non-forestry use and the general provisions of this Program, including vegetation conservation.

7.2.6 Industrial

A. Water-dependent industrial uses are preferred over non-water-dependent industrial uses. Water-oriented uses are preferred over non-water-oriented uses.

B. Water-related and non-water oriented industrial uses shall not be allowed if they displace existing viable water-dependent uses or if they are proposed to occupy space designated for water-dependent uses identified in a previously approved SSDP or SLE.

C. New or expanded non-water-oriented industrial development may be allowed only when:

1. It is part of a mixed-use project including water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration; or

2. Navigability is severely limited at the site and the development provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration; or

3. The site is physically separated from the shoreline by another property or public right-of-way.

D. Industrial development and redevelopment should be encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated prior to impacting undeveloped shoreline areas.

E. Proposed developments shall maximize the use of existing industrial facilities and avoid duplication of dock or pier facilities before expanding into undeveloped areas or building new facilities. Proposals for new industrial developments shall demonstrate the need for expansion into an undeveloped area.

F. Only water-dependent elements of a proposal for industrial use may encroach on required vegetated buffers of this Program (see Table 4, Appendix C, Critical Areas Regulations).

G. Water-oriented structures may be allowed to exceed a height of thirty-five (35) feet. Such structures may include, but are not limited to, facilities which must be of a greater height in order to function, such as cranes or other facilities designed to move or place products, fixed loading facilities that must provide clearance over vessels, storage facilities such as grain elevators, as well as accessory features such

as lighting required for operations. The applicant must demonstrate compliance with the following criteria:

1. The public interest will be served by accommodating the increased height.
2. The view of a substantial number of residences in areas adjoining such shorelines will not be obstructed.
3. Increased height will not substantially interfere with views from a designated public place, vista, or feature specifically identified in an adopted local, state, or federal plan or policy.

7.2.7 Institutional

A. Water-oriented institutional uses and developments are preferred.

B. Where allowed, non-water-oriented institutional uses may be permitted:

1. If navigability is severely limited at the proposed site, and the institutional use provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as providing public access and ecological restoration; or
2. If the site is physically separated from the shoreline by another property or public right-of-way; or
3. As part of a mixed-use development that provides a significant public benefit with respect to the Shoreline Management Act's objectives, such as public access and ecological restoration.

C. Loading, service areas, and other accessory uses shall be located landward of a primary structure or underground whenever possible.

D. New institutional development within shoreline jurisdiction:

1. Shall be designed such that no new shoreline stabilization measures are necessary;
2. Shall be located and designed to minimize view obstructions to and from the shoreline from other properties; and,
3. Shall be prohibited in floodways and channel migration zones.

7.2.8 In-stream Structures

A. Applications for new or expanded in-stream structural uses shall include the following information prior to final approval, unless the City determines that the issues are adequately addressed via another regulatory review process:

1. A hydraulic analysis prepared by a licensed professional engineer that describes anticipated effects of the project on stream hydraulics, including potential increases in base flood elevation, changes in stream velocity, and the potential for redirection of the normal flow of the affected stream.

2. A habitat management plan prepared by a qualified professional biologist that describes the anticipated effects of the project on fish and wildlife resources, provisions for protecting in-stream resources during construction and operation, and measures to compensate for impacts to resources that cannot be avoided.

3. A description of sites proposed for the depositing of debris, overburden, and other waste materials generated during construction.

4. Proposed provisions for accommodating public access to and along the affected shoreline, as well as any proposed on-site recreational features.

7.2.9 Mining

Mining in Washington is controlled by the Surface Mining Act of 1970 (RCW 78.44) and is administered by the Washington Department of Natural Resources. The provisions of this legislation shall be followed in all cases.

A. An applicant for mining and associated activities within the shoreline jurisdiction shall demonstrate that the proposed activities are dependent on a shoreline location consistent with this Program and WAC 173-26-241 3(h). Non-water-dependent mining activities are prohibited within shoreline jurisdiction.

B. To be approved the applicant must demonstrate that there will be no:

1. Adverse impact on the structural integrity of the shoreline that would change existing aquatic habitat or aquatic flow characteristics; and

2. Changes in hydraulic processes to or from adjacent waterbodies that would damage aquatic habitat, shoreline habitat, or groundwater.

C. Mining waterward of the OHWM may be permitted only when the applicant demonstrates that:

1. Removal of specified quantities of sand and gravel or other materials at specific locations will not adversely affect natural gravel transport or other stream processes.

2. The proposed mining and associated activities will not have significant adverse impacts on habitat for priority species and will not cause a net loss of shoreline ecological functions.

3. Determinations required by 1 and 2 above must be made consistent with RCW 90.58.100(1) and WAC 173-26-201(2)(a).

4. In considering renewal, extension, or reauthorization of other mining operations waterward of the OHWM in locations where they have previously been conducted, the City must require compliance with this Subsection to the extent that no such review has previously been conducted. Where there has been prior review, the City must review previous determinations comparable to the requirements of this Section to assure compliance with this Subsection under current site conditions.

D. To ensure future use and visibility of the shoreline areas after completion of mining activities, the following provisions for land reclamation shall be met and shall be demonstrated in a reclamation plan approved by the Washington Department of Natural Resources that complies with the format and standards of RCW 78.44 and WAC 332-18:

1. All reclamation shall be completed within two (2) years after discontinuance of mining operations.

2. All equipment, machinery, buildings, and structures shall be removed from the site upon discontinuance or abandonment of mining operations.

3. Backfill material used in site reclamation shall be natural materials. Combustible, flammable, noxious, toxic, or solid waste materials are not permitted as backfill or for on-site disposal.

4. Reclamation shall prevent future erosion and sedimentation. Topography of the site shall be restored to contours compatible with the surrounding land and shoreline area.

5. Final topography of the site shall not cause standing water to collect and remain on the site except as part of a sedimentation collection and removal system.

6. All exposed areas shall be revegetated utilizing native, self-sustaining plants suitable to the immediate shoreline environment.

E. The provisions of this section do not apply to dredging of authorized navigation channels or management, placement, or beneficial reuse of dredged materials when conducted in accordance with Section 7.3.5 and all other provisions of this Program.

7.2.10 Recreational Development

A. Shoreline recreational development that provides access to and enjoyment of the water and shorelines of the state are a preferred use.

B. Recreational areas and facilities on the shoreline shall provide physical or visual public access to the shoreline, subject to Section 6.5 of this SMP.

C. Recreational uses and developments may be permitted when they do not displace water-dependent uses and are consistent with existing water-related and water-enjoyment uses.

D. Only water-dependent or water-enjoyment elements of a recreational proposal as outlined in section 3.K of Appendix C may encroach on required vegetated buffers of this Program.

E. Commercial recreational development must also be consistent with the requirements of Section 7.2.4 of this SMP.

F. Parking areas shall be located outside of shoreline jurisdiction, unless unfeasible, in which case parking facilities shall be sited on the landward side of recreational development and levees/dikes, if present, in accordance with the mitigation sequencing provisions of this Program.

G. Provisions shall be made for adequate vehicular parking and safe pedestrian crossings.

H. New overwater structures for recreation use shall be allowed only when:

1. They accommodate a water-dependent recreation use or facility; or
2. They provide access for the public to enjoy the shorelines of the state; and
3. The resulting impacts to critical areas and the associated buffer are fully mitigated.

I. Recreational facilities shall provide adequate facilities for potable water supply, sewage disposal, and/or garbage collection when feasible.

7.2.11 Residential Development

A. New residential development shall comply with the shoreline buffer provisions established in Table 4 of Section 3.H of Appendix C. Redevelopment or expansion of residential structures shall also conform to the provisions in Section 3.3 of this SMP as applicable.

B. New residential development including subdivisions, short plats, new appurtenances and accessory uses and structures:

1. Shall be designed such that no new shoreline stabilization measures are necessary for the life of the structure.
2. Shall be located and designed to minimize view obstructions to and from the shoreline from other properties.
3. Shall be prohibited in floodways and channel migration zones.

C. Residential appurtenances, accessory uses, and facilities serving a residential structure shall be located outside setbacks, critical areas, and buffers unless otherwise allowed by this Program.

D. New residential lots shall be configured such that new structural flood hazard reduction and shoreline stabilization measures will not be required during the life of the development or use.

1. Plats and subdivisions shall be designed and developed in a manner that assures no net loss of ecological functions will result from full build-out of all lots.

C. Clustering of residential units, as permitted by the City, is permitted where minimization of physical and visual impacts to the shorelines can be achieved.

D. Where housing developments are proposed in locations that would interrupt existing shoreline views, provisions shall be made for reasonable view corridors. The City may adjust the project dimensions and/or prescribe development operation and screening standards as deemed appropriate.

7.2.12 Transportation and Parking

A. Roads, Railroads and Bridges

1. New or expanded surface transportation facilities not related to and necessary for the support of shoreline activities consistent with this SMP shall be located outside of the shoreline jurisdiction wherever possible unless location outside of shoreline jurisdiction is infeasible.

2. The applicant shall demonstrate that new or expanded facilities are designed to:

a. Minimize impacts to critical areas and associated buffers and to minimize alterations to the natural or existing topography to the extent feasible;

b. Avoid or minimize the need for shoreline stabilization.

3. New transportation crossings over streams shall be avoided, but where necessary shall utilize bridges rather than culverts to the extent possible.

4. Requirements for bridge and culvert installation crossing all streams shall be consistent with the Washington State Department of Fish and Wildlife standards.

5. All excavation materials and soils exposed to erosion by all phases of road, bridge, and culvert work shall be stabilized and protected by seeding, mulching, or other effective means, both during and after construction.

6. New transportation crossings over wetlands and the associated buffer shall be avoided and minimized. Where demonstrated that no other route is feasible, bridges that do not obstruct the movement of surface or groundwater are

required unless it can be demonstrated that fill and compensatory mitigation will produce equal or greater ecological functions.

7. Private access roads or driveways providing ingress and egress for individual single-family residences or lots shall be limited to the minimum width allowed by the fire code.

8. Bridges shall provide the maximum length of clear spans feasible with pier supports to produce the minimum amount of deflection feasible.

9. Circulation routes to and on shorelands shall include systems for pedestrian, bicycle, and public transportation where appropriate.

B. Non-Motorized Facilities

1. Non-motorized facilities, such as trails, shall comply with provisions for public access that are part of this Program.

2. New or expanded non-motorized transportation facilities shall be located outside of critical areas and their associated buffers or in the outer 25 percent of the critical area buffer with the exception of non-motorized facilities constructed for water access.

3. Elevated walkways shall be utilized where feasible to cross wetlands and streams instead of culverts.

C. Parking facilities are not a preferred use and shall be allowed only where necessary to support an authorized use. Parking facilities accessory to a permitted use shall be:

1. Set back as far as possible from the OHWM and outside shoreline jurisdiction where feasible; and

2. Located outside of critical areas and associated buffers.

D. Facility lighting shall be designed and operated to avoid illuminating nearby properties or public areas; prevent glare on adjacent properties, public areas, or roadways to avoid infringing on the use and enjoyment of such areas; and to prevent hazards. Methods of controlling spillover light include, but are not limited to, limits on height of structure, limits on light levels of fixtures, light shields, setbacks, buffer areas, and screening. Lighting must be directed away from critical areas unless necessary for public health and safety.

7.2.13 Utilities

These provisions apply to services and facilities that produce, convey, store, or process power, gas, sewage, communications, oil, waste, and similar services and functions. On-site utility features serving a primary use, such as a water, sewer, or gas line to a residence or

other approved use, are accessory utilities and shall be considered a part of the primary use.

A. New or expanded non-water dependent utilities or parts thereof may be located within shoreline jurisdiction only when the applicant demonstrates based on analysis of alternative locations and technologies that:

1. No alternative location outside of shoreline jurisdiction is feasible;

2. If a new corridor is proposed, utilization of existing corridors is not feasible, including expansion or replacement of existing facilities; and

3. The proposal minimizes changes to the visual character of the shoreline environment as viewed from the water and surrounding views to the water.

4. The above requirements do not apply to water-dependent utilities, or parts thereof, which require a shoreline location, such as stormwater or wastewater treatment plant outfalls.

B. The presence of existing utilities shall not justify more intense development. Rather, the development shall be consistent with the City Comprehensive Plan, Development Regulations, and this SMP, and shall be supported by adequate utilities.

C. Where overhead electrical transmission lines must parallel the shoreline, they shall be outside of shoreline jurisdiction unless infeasible due to site constraints, including but not limited to topography or safety.

D. Transmission, distribution, and conveyance facilities shall be located in existing rights of way and corridors whenever feasible.

E. Utility crossings of waterbodies shall be attached to bridges where feasible. Where attachment to a bridge is not feasible, underground construction methods that avoid surface disturbance are preferred and shall cross shoreline jurisdictional areas by the shortest, most direct route feasible, unless such route would cause significant environmental damage.

F. All underwater pipelines transporting liquids intrinsically harmful to aquatic life or potentially harmful to water quality shall be equipped with automatic shut-off valves.

G. Structural utility buildings, such as pump stations, electrical substations, or other facilities, shall be located outside of jurisdictional shoreline areas, unless infeasible, in which case they shall be visually compatible in scale with surrounding development and landscape to provide compatibility with natural features and adjacent uses.

H. Stormwater outfalls may be placed below the OHWM to reduce scouring. New outfalls and modifications to existing outfalls shall be designed and constructed to avoid impacts to existing native aquatic vegetation attached to or rooted in substrate.

I. Existing facilities such as the City's Municipal Water System and Sewer System, that are located landward of a levee, may be improved in accordance with the mitigation sequencing provisions contained in this Program.

7.3 Shoreline Modification

7.3.1 General Regulations

All shoreline modifications must comply with the following general provisions and the following specific provisions, as appropriate:

A. Structural modifications may be permitted only where they are demonstrated to be necessary to support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage or are necessary for reconfiguration of the shoreline for mitigation or enhancement purposes;

B. Preference shall be given to shoreline modifications that have a lesser impact on ecological functions; and

C. Modifications shall be designed to incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes.

7.3.2 Shoreline Stabilization

A. Proposals for new shoreline stabilization shall demonstrate that proposed measures are the minimum size necessary, and comply with mitigation sequencing requirements of this program. Proposals for additions to of enlargements of shoreline stabilization measures shall be treated as new stabilization for all requirements of this Section.

B. Compliance with the following criteria shall be documented through geotechnical analysis by a qualified professional. Geotechnical reports pursuant to this Section shall address the necessity for shoreline stabilization by estimating timeframes and rates of erosion and shall report on the urgency associated with the specific situation.

1. New development and lots created by subdivision shall demonstrate that new shoreline stabilization will not be necessary, for the life of the development, in order for reasonable development to occur.

2. Development on steep slopes shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure (see Appendix C, Critical Areas Regulations).

3. Development that would require new shoreline stabilization that would cause significant impacts to adjacent or down-current properties and shoreline areas, shall not be allowed.
4. Hard armoring solutions shall be authorized only:

    a. When a report finds that a primary structure will be damaged within three (3) years from shoreline erosion without hard armoring measures;

    b. If waiting to provide erosion protection would foreclose the opportunity to use measures that avoid impacts on ecological functions; or

    c. When hard armoring is not justified based on the above criteria, a geotechnical report may be used to justify protection against erosion using soft shoreline stabilization measures.

C. Shoreline stabilization shall be designed and constructed to be the minimum size necessary and to avoid or minimize stream channel direction modification, realignment, and straightening, or to result in increased channelization of normal stream flows or impacts to sediment transport.

D. New or expanded shoreline stabilization shall follow this hierarchy of preference:

1. No action (allow the shoreline to retreat naturally).

2. Non-structural methods such as increased building setbacks, relocating structures, and/or other methods to avoid the need of stabilization.

3. Stabilization constructed of soft structural protection and bioengineering, including, but not limited to, protective berms or vegetative stabilization.

4. Soft structural stabilization, as described above, in combination with hard structure stabilization, as described below, constructed as a protective measure.

5. Hard structure stabilization constructed of artificial materials such as, but not limited to, riprap or concrete.

Applicants should consult applicable shoreline stabilization guidance documents, such as the Integrated Streambank Protection Guidelines, promulgated by state or federal agencies.

E. New structural shoreline stabilization measures to protect an existing primary structure, including residences, are only allowed when there is conclusive evidence, documented by a geotechnical analysis that the structure is in danger from shoreline

erosion caused by currents or waves rather than from upland conditions. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis should evaluate on-site drainage issues and address drainage problems by relocating drainage away from the shoreline edge before considering structural shoreline stabilization. Considerations shall include the feasibility of reconstruction and/or relocation of the structure if it is cost effective in relation to any new or expanded erosion control structures. New structural shoreline stabilization measures shall not result in a net loss of shoreline ecological functions.

F. New shoreline structural stabilization may be permitted in support of a water-dependent development when all of the conditions below are met as demonstrated in a geotechnical report by a qualified professional:

1. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

2. There is a need to protect primary structures from damage due to erosion.

3. Non-structural measures, such as placing the development farther from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

4. The stabilization structure will not result in a net loss of shoreline ecological functions.

G. New shoreline structural stabilization may be permitted in support of a new non-water-dependent development (including single-family residences) when all of the conditions below are met as demonstrated in a geotechnical report by a qualified professional:

1. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

2. There is a need to protect primary structures from damage due to erosion caused by natural processes, such as currents or waves.

3. Non-structural measures, such as placing the development farther from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

4. The stabilization structure will not result in a net loss of shoreline ecological functions.

H. New shoreline structural stabilization may be permitted to protect ecological restoration or hazardous substance remediation projects when the conditions below are met as demonstrated in a geotechnical report by a qualified professional:

1. Non-structural measures, such as placing the development farther from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

2. The stabilization structure will not result in a net loss of shoreline ecological functions.

I. The construction of a shoreline stabilization structure, either “soft” or “hard” for the primary purpose of creating dry land is prohibited.

J. Replacement of an existing shoreline stabilization structure with a similar structure is permitted if there is a demonstrated need to protect existing primary uses or structures from erosion caused by current or wave action. Replacement walls or bulkheads shall not encroach waterward of the OHWM or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure. Replacement must result in no net loss of ecological functions. For purposes of this Subsection regarding standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure that can no longer adequately serve its purpose. Additions to or increases in the size of existing shoreline stabilization measures shall be considered new structures.

K. A publicly financed or subsidized shoreline stabilization project shall not restrict existing public access, and where feasible, such structural stabilization shall incorporate public access. See Section 6.5, Public Access, for additional information.

L. Bioengineered projects shall be designed by a qualified professional in accordance with the most current, accurate, and complete scientific and technical information available, and shall incorporate a variety of sustainable plants, unless demonstrated infeasible for the particular site.

M. Gabions (wire-mesh baskets filled with concrete or rocks) shall not be used in bulkhead construction of shoreline stabilization structures, where alternatives more consistent with this Program are feasible, because of their limited durability and the potential hazard they present to shore users and the shoreline environment.

7.3.3 Breakwaters, Weirs, and Groins

A. Breakwaters, groins and weirs located waterward of the OHWM shall be allowed only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose.

B. Open pile or floating breakwater designs shall be used unless it can be demonstrated that riprap or other solid construction would not result in any greater net impacts to shoreline ecological functions, processes, fish passage, or shore features.

C. Breakwaters, weirs and groins shall be designed to protect critical areas and shall provide for mitigation according to the sequence defined in Section 6.1 of this SMP.

7.3.4 Fill and Excavation

A. Fill may be placed in flood hazard areas only when otherwise allowed by the Frequently Flooded Areas Regulations in this Program (Appendix C) and where it is demonstrated in a hydrogeological report prepared by a qualified professional that adverse impacts to hydrogeologic processes will be avoided.

B. Fill placed below the OHWM for any other use besides ecological restoration requires a Shoreline Conditional Use Permit.

C. Fill may be placed below the OHWM only when it is demonstrated that the fill is necessary to:

1. Accomplish an aquatic habitat restoration plan.
2. Support a mitigation action, environmental restoration, beach nourishment or other enhancement project.
3. Correct the adverse results of past shoreline modification that have disrupted natural stream geomorphic conditions and adversely affected aquatic or terrestrial habitat.
4. Support a water-dependent use.
5. Serve as part of a public access proposal.
6. Support cleanup of contaminated sediments as part of an interagency environmental clean-up plan, or permitted under MTCA or CERCLA.
7. Expand or alter transportation facilities of statewide significance currently located on the shoreline only when demonstrated that alternatives to fill are not feasible.

D. Fill is restricted in wetlands or fish and wildlife habitat conservation areas in accordance with the critical areas standards in this Program, Appendix C.

E. Excavation of previously deposited dredge spoils above the OHWM may be permitted if the spoils site is part of a dredge materials management plan and the spoils were not originally placed as part of a beach nourishment or other shoreline restoration project.

F. Excavation below the OHWM is considered dredging and is subject to provisions in Section 7.3.5.

7.3.5 Dredging and Dredge Material Disposal

A. Dredging and in-water dredge disposal must be approved by state and federal agencies with jurisdiction, with documentation provided to local government as a condition of any shoreline permit.

B. New dredging shall be permitted only:

1. When establishing, expanding, or reconfiguring navigation channels, anchorage areas, and basins in support of existing navigational uses;
2. When implementing an approved regional dredge management plan for flood control purposes;
3. As part of an approved habitat improvement project;
4. As part of a Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act project;
5. In conjunction with a new port, bridge, navigational structure, wastewater treatment facility, essential public facility, hydroelectric facility, fish hatchery, or other water-dependent use for which there is a documented public need and where other feasible sites or methods are not feasible; or
6. When otherwise approved by state and federal agencies.

C. New development shall be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.

D. Maintenance dredging shall be restricted to previously authorized locations, depths, and widths.

E. Dredging waterward of the OHWM for the primary purpose of obtaining fill material is allowed only when the material is necessary for the restoration of ecological functions. When allowed, the site where the fill is to be placed must be located waterward of the OHWM. The project must be either associated with a Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act habitat restoration project or, if approved through an SCUP, any other significant habitat enhancement project.

F. Dredge materials exceeding the Ecology criteria for toxic sediments shall be disposed of according to state and federal law. Proof of proper disposal at an upland permitted facility may be required.

G. Disposal of dredge material on shorelands or wetlands within a river's channel migration zone shall be discouraged. In the limited instances where it is allowed, such disposal shall require an SCUP. Disposal of dredge material within wetlands or

within a river's channel migration zone shall be allowed only when proposed as part of an ecological restoration project demonstrated by a qualified professional to:

1. Improve wildlife habitat;

2. Correct the adverse results of past shoreline modification that have disrupted natural stream geomorphic conditions and adversely affected aquatic or terrestrial habitat; or

3. Create, expand, rehabilitate, or enhance a beach when permitted under this Program and any required state or federal permit.

This provision is not intended to address discharge of dredge material into the flowing current of the river or in deep water within the channel where it does not substantially affect the geohydrologic character of the channel migration zone.

H. When allowed, dredge material disposal must meet the following standards:

1. Dredge disposal in shoreline jurisdiction shall be permitted only where it is demonstrated by a qualified professional that the disposal will not result in significant or ongoing adverse impacts to water quality, fish and wildlife habitat conservation areas and other critical areas, flood holding capacity, natural drainage and water circulation patterns, significant plant communities, prime agricultural land, and public access to shorelines. When such impacts are unavoidable, they shall be minimized and mitigated such that they result in no net loss of functions.

2. Dredge disposal both above and below the OHWM may be approved if it is demonstrated that it complies with the provisions of Section 7.3.5.H.1 above and one or more of the following:

   a. It benefits shoreline resources; or

   b. If applicable, it utilizes the guidance from the 2007, or as amended, U.S. Army Corps of Engineers and Environmental Protection Agency publication EPA842-B-07-001, *Identifying, Planning, and Financing Beneficial Use Projects Using Dredged Material – Beneficial Use Planning Manual*; or

   c. For dredging projects under U.S. Army Corps of Engineers jurisdiction, the disposal has been identified and evaluated through an approved Corps Dredge Management Material Program.

I. Clearing of secondary, volunteer vegetation growth on approved dredge disposal deposits does not require compensatory mitigation.

J. Dredge disposal is allowed through an SSDP on lands already covered by legally deposited dredge spoils.

K. Dredging and dredge disposal shall be scheduled to minimize impacts to biological productivity (including, but not limited to, fish runs, spawning, and benthic productivity) and to minimize interference with fishing activities and other water-dependent uses.

L. Dredging and dredge materials disposal shall be done in a manner that avoids or minimizes significant ecological impacts and impacts that cannot be avoided shall be mitigated.

7.3.6 Shoreline Habitat and Ecological Enhancement Projects

Shoreline habitat and ecological enhancement projects are those in which public and/or private parties engage to establish, restore, or enhance ecological sites.

A. Long-term maintenance and monitoring shall be included in restoration or enhancement projects.

B. Shoreline restoration and enhancement projects shall be designed using scientific and technical information and implemented using best management practices. Applicants should consult applicable guidance documents, such as the most current version of the Washington State Department of Fish and Wildlife's Stream Habitat Restoration Guidelines, promulgated by state or federal agencies.

C. Habitat creation, expansion, restoration, and enhancement projects may be permitted in all shoreline environment designations subject to required state or federal permits when the applicant has demonstrated that there will be a specific ecological improvement and the following:

1. Spawning, nesting, or breeding fish and wildlife habitat conservation areas will not be adversely affected;

2. Water quality will not be degraded;

3. Flood storage capacity will not be degraded;

4. Streamflow will not be reduced;

5. Impacts to critical areas and buffers will be avoided and where unavoidable, minimized and mitigated;

6. The project will not interfere with the normal public use of the navigable waters of the state; and

7. The project is consistent with the types and purposes of restoration information provided in the Shoreline Restoration Plan, Appendix D.

D. Shoreline restoration and enhancement projects that include shoreline modification actions may be allowed provided the primary purpose of such action is clearly restoration of the natural character and ecological functions of the shoreline.

8. Shoreline Administration and Enforcement

8.1 General

A. All proposed new uses and new development occurring within the shoreline jurisdiction must conform to RCW 90.58, the Act, and this Program, whether or not a shoreline permit is required.

B. "The City," for the purposes of making administrative decisions and processing permits as may be required by the Program, means the Kelso City Manager or his/her designees.

C. Permit procedures and enforcement shall be conducted in a manner consistent with constitutional limitations on regulation of private property as specified in WAC 17326-186 (5) and WAC 173-26-191(2)(a)(iii)(A).

D. SSDPs, SLEs, SCUPs, Shoreline Variances, and permit revisions are subject to review procedures in accordance with the provisions of Chapter 18B of the Kelso Municipal Code (KMC) or as subsequently amended.

E. The regulations of the Program shall be used in conjunction with the regulations contained in the KMC. Where there is a conflict between the KMC and the Program, the Program shall control, as determined by the City.

F. The effective date of a shoreline permit or, variance shall be the date of filing with the Ecology as provided in RCW 90.58.140(6). The permit time period does not include the time during which a use or activity was not actually pursued due to the pendency of administrative appeals or legal actions or due to the need to obtain any other government permits and approvals for the development that authorize the development to proceed, including all reasonably related administrative or legal actions on any such permits or approvals.

G. The City shall ensure that any official action will comply with the State Environmental Policy Act.

8.2 Application Requirements

A. A complete application for an SSDP, SCUP, or Shoreline Variance shall contain, at a minimum, the information required for a complete application specified in WAC 173-27-180, as determined by the City.

B. When an applicant submits an application for any development proposal, the application shall indicate whether any critical area is located on the site.

C. The City may conduct a preliminary environmental review, based on existing in-house resources and data, to determine if critical areas are known or suspected to exist on the applicant's parcel; however, the ultimate burden of proof is on the applicant to provide sufficient data to the City should the City suspect critical areas are present.

D. A representative of the City may visit the site and, in conjunction with the review of the information provided by the applicant and any other suitable information, shall make a determination as to whether or not sufficient information is available to evaluate the proposal. If it is determined that the information presented is not sufficient to adequately evaluate a proposal, the City shall notify the applicant that additional studies as specified herein shall be provided.

E. When the determination of critical areas has been completed, a written report will be issued to the applicant, placed in an address file, and a copy sent to the property owner if different from the applicant. A property owner may request a re-evaluation by the City once in any twelve (12)-month period when a change in physical conditions or government institutional actions warrants such re- evaluation.

F. A shoreline permit (SSDP or SCUP) is required if it is determined that the proposed alteration or development is located within jurisdictional shoreline area, and/or a critical area or buffer.

1. Technical assessments. The City may require the applicant to submit a technical assessment addressing how the proposal incorporates best available science. The technical assessment shall be adequate for the City to evaluate the development proposal and all probable adverse impacts to critical areas. If adequate factual information exists to facilitate such evaluation, the City may determine that a technical assessment is not necessary. The City will advise the applicant of existing technical information that may be pertinent to their property. Technical assessments shall be attached to the development permit application package.

2. All critical area technical assessments and studies required of the applicant shall be prepared by a qualified expert. The City's decision to require additional studies will be based on the complexity of the project and/or a site inspection. The applicant for development shall be responsible for any cost associated with preparing critical area technical assessments and/or studies.

G. The City shall solicit comments or technical assistance on the shoreline permit application from resource agencies with jurisdiction over the proposal within 14 days of determining an application is complete. These agencies shall have thirty (30) days from the date the application is circulated by the City for comments. If a response is not received from the resource agency within the 30-day review period, the City will assume there are no comments on the project or activity forthcoming from the resource agency.

H. Any person preparing to submit an application for development or use of land located within a critical area or associated buffer shall first apply for a pre-application conference, unless waived by the City in concurrence with the applicant. At this meeting, the City shall discuss the requirements of these regulations and provide applicable critical areas maps, scientific information, and other source materials. The City shall summarize the application review process and work with the proponent to identify potential issues that may arise during the review process in addition to discussing other permit procedures and requirements.

I. The City will notify the public and other agencies with jurisdiction of applications for a shoreline substantial development, conditional use, or variance permit as required by WAC 173-27-110.

8.3 Shoreline Letter of Exemption (SLE)

A. The City may issue a Shoreline Letter of Exemption (SLE) for proposed development activities or programs in jurisdictional shoreline areas that do not require an SSDP.

B. All Shoreline Letters of Exemption issued by the City shall be in writing and maintained in a file.

C. An SLE is a Type I permit and shall be processed in accordance with the provisions of Chapter 18B of the KMC as it now exists or as subsequently amended.

D. An SLE may be issued for project-specific development activities or for programmatic, routine activities that may be repeated on a regular basis in accordance with approved standards such as the repair and maintenance of roads, right-of-ways, trails, parks, and/or storm water facilities.

E. Activities authorized through the issuance of an SLE must comply with all applicable provisions of the Kelso Municipal Code and comply with conditions included for approval to achieve consistency and compliance with the provisions of this Program and the Act.

F. Requests or applications for an SLE shall be submitted in a format prescribed by the City and include such documentation as may be required by the City.

G. If the exemption is approved, the City shall prepare and provide an SLE to the applicant and Ecology indicating the specific applicable exemption provisions from WAC 173-27-040 and providing a summary of the project's consistency with this Program and the Act, as amended.

H. An exemption from an SSDP is not an exemption from compliance with the Act or the Program, or from any other regulatory requirements. A use or development exempt from an SSDP may require an SCUP or a Shoreline Variance.

I. A project requiring an additional permit and subject to an exemption to an SSDP shall be reviewed under the criteria of the underlying permit with an additional finding recorded by the City addressing the grounds under which the project is exempt.

J. A denial of an exemption shall be in writing and shall identify the reason(s) for the denial.

8.4 Shoreline Substantial Development Permits (SSDP)

A. An SSDP shall be required for projects occurring within the City's shoreline jurisdiction pursuant to the requirements and procedures contained in WAC 173-27 (Shoreline Management Permit and Enforcement Procedures); except for those projects described in Section 3.2, Exemptions from a Shoreline Substantial Development Permit.

B. An SSDP is a Type II permit and shall be processed in accordance with the provisions of Chapter 18B of the KMC as it now exists or is subsequently amended by the City, except that requests for review shall be made to the Shoreline Hearings Board as outlined in RCW 90.58.180.

C. Applications for SSDPs shall be accompanied by the application materials specified in WAC 173-27-180 *Application Requirements for Substantial Development, Conditional Use, or Variance Permit* as determined by the City.

D. Upon the review of materials submitted by an applicant the City may, at its discretion, require peer review be completed by a consultant chosen by the City, at the sole expense of the applicant.

E. Notification of the public shall be as required by Chapter 18B of the KMC, as it now exists or is subsequently amended, , except that public comment periods as outlined in 18B.05.020 E shall be 30 days for shoreline permits.

F. Time requirements for SSDPs are as follows (See WAC 173-27-090 for complete language.):

1. Construction activities shall commence, or where no construction activities are involved, the use or activity shall commence within two (2) years of the effective date of an SSDP.

2. The period for commencement of construction or use may be extended once for a one (1)-year period if a request based on reasonable factors is filed before the expiration date and notice of the proposed extension is given to parties of record.

3. The authorization to conduct certain development activities (see WAC 173-27090) shall terminate five (5) years after the effective date of an SSDP.

4. The authorization period to conduct development activities may be extended once for a one (1)-year period if a request based on reasonable factors is filed before the expiration date and notice of the proposed extension is given to parties of record and the department.

5. The time periods in Subsections F (1) and (4), above, do not include the time during which a use or activity was not actually pursued due to the pendency of administrative appeals or legal actions or due to the need to obtain any other government permits and approvals for the development that authorize the development to proceed, including all reasonably related administrative or legal actions on any such permits or approvals.

G. Applications for an SSDP will be reviewed against the following criterion:

1. Proposed use or development on shorelines of the state must be consistent with the policy and provisions of the Act and this Program.

H. Appeals to the Shorelines Hearings Board shall be consistent with RCW 90.58.140. Construction pursuant to a shoreline permit may not begin or be authorized until twenty-one (21) days from the date the permit decision was filed with Ecology.

8.5 Shoreline Conditional Use Permits (SCUP)

A. The purpose of an SCUP is to provide a system within the Program which allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58.020.

B. An SCUP is required for uses and development that are not classified in the Program and for those uses and modifications as indicated in Table 7-1 of this Program. In authorizing a conditional use, the City may attach special conditions to the permit to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the Act and this Program.

C. An SCUP is a Type III permit and shall be processed in accordance with the provisions of Chapter 18B of the KMC as it now exists or as subsequently amended, except that requests for review shall be made to the Shoreline Hearings Board as outlined in RCW 90.58.180.

D. Applications for an SCUP shall be accompanied by the application materials specified in WAC 173-27-180 *Application Requirements for Substantial Development, Conditional Use, or Variance Permit* as determined by the City.

E. The criteria for approving conditional uses shall be consistent with WAC 173-27-160 *Review Criteria for Conditional Use Permits* and shall include the following:

1. That the proposed use is consistent with the policies of RCW 90.58.020 and the Program;

2. That the proposed use will not interfere with the normal public use of public shorelines;

3. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and the Program;

4. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

5. That the public interest suffers no substantial detrimental effect.

6. Other uses that are not classified or set forth in the Program may be authorized as conditional uses provided that the applicant can demonstrate consistency with the requirements of this Section, WAC 173-27-160, and RCW 90.58.020.

7. When reviewing SCUP applications, consideration shall be given to the cumulative impact of like actions in the area. For example, if any SCUPs were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

8. Uses which are specifically prohibited or not allowed by the Program may not be authorized through the issuance of an SCUP.

F. To ensure compliance with the applicable criteria stated in the KMC, the City shall have the authority to require and approve a specific plan for a proposed use, to impose performance standards in the form of conditions of approval that make the use compatible with other permitted uses in the area, and to expand the requirements set forth in the KMC by means of conditions that are applicable to the proposed use. In no case shall the City have the authority to reduce the requirements of the City's municipal code when considering an application for a conditional shoreline development permit; any such reduction shall only be granted upon the issuance of a variance.

G. Where plans are required to be submitted and approved as part of the application for an SCUP, modifications of the original plans may be made only after a review has been conducted and approval granted by the City in accordance with the provisions of the KMC.

H. Time requirements for SCUPs are as outlined in WAC 173-27-090. Construction pursuant to a permit may not begin or be authorized until twenty-one days (21) from the date the permit decision was filed as provided in RCW 90.58.140 (6)(b).

8.6 Variances

A. The purpose of a shoreline variance is strictly limited to granting relief to specific bulk, dimensional, or performance standards set forth in the Program where there are extraordinary or unique circumstances relating to the property such that the strict implementation of the Program would impose unnecessary hardship on the applicant or thwart the policies set forth in the Act.

B. Variances from the use regulations of the Program are prohibited.

C. Shoreline variances are Type III permits and shall be processed in accordance with the provisions of Chapter 18B of the KMC as it now exists or as subsequently amended, except that requests for review shall be made to the Shoreline Hearings Board as outlined in RCW 90.58.180.

D. Applications for shoreline variance shall be accompanied by the application materials specified in WAC 173-27-180 *Application Requirements for Substantial Development, Conditional Use, or Variance Permit* as determined by the City.

E. Applications for shoreline variance shall be reviewed with the following criteria:

1. Variance permits for development and/or uses that will be located landward of the OHWM, as defined in RCW 90.58.030 (2)(b), and/or landward of any wetland as defined in RCW 90.58.030 (2)(h), may be authorized provided the applicant can demonstrate all of the following:

    a. That the strict application of the bulk, dimensional or performance standards set forth in the applicable master program precludes, or significantly interferes with, reasonable use of the property;

    b. That the hardship described in 1.a of this Subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of the master program, and not, for example, from deed restrictions or the applicant's own actions;

    c. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program and will not cause adverse impacts to the shoreline environment;

    d. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;

    e. That the variance requested is the minimum necessary to afford relief; and

    f. That the public interest will suffer no substantial detrimental effect.

2. Variance permits for development and/or uses that will be located waterward of the OHWM, as defined in RCW 90.58.030 (2)(b), or within any wetland as defined in RCW 90.58.030 (2)(h), may be authorized provided the applicant can demonstrate all of the following:

   a. That the strict application of the bulk, dimensional or performance standards set forth in the applicable master program precludes all reasonable use of the property;

   b. That the proposal is consistent with the criteria established under Subsection 1.b through 1.f of this Section; and

   c. That the public rights of navigation and use of the shorelines will not be adversely affected.

3. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example if variances were granted to other developments and/or uses in the area where similar circumstances exist the total of the variances shall also remain consistent with the policies of RCW 90.58.020 and shall not cause substantial adverse effects to the shoreline environment.

8.7 Revisions to Permits

A. When an applicant seeks to revise a SLE, SSDP, SCUP, or shoreline variance, whether such permit or variance was granted under this Program or under the Program in effect prior to adoption of this Program, the City shall request from the applicant detailed plans and text describing the proposed changes to the project. If the staff determines that the proposed changes are within the general scope and intent of the original SLE, SSDP, SCUP, or shoreline variance, as the case may be, the revision may be approved by the City without the need for the applicant to file a new permit application provided the development is consistent with the Act, and WAC 173-27-100.

B. All shoreline permit revisions shall be transmitted to Ecology upon the City's final decision. If the revision is to a SLE or SSDP, it becomes effective immediately upon final decision by the City. If the permit revision is concerning a shoreline conditional use or shoreline variance permit, the proposed revision is subject to Ecology review. Ecology shall respond with its final decision on the permit revision request within fifteen (15) days of the date of receipt by Ecology per WAC 173-27-100(6). The City shall notify parties of record of the final decision.

C. Shoreline permit revisions may be appealed to the Shoreline Hearings Board within twenty-one (21) days of the final decision to the permit revision in accordance with the provisions of WAC 173-27- 100(8).

8.8 Permit Filing

A. After all local permit administrative appeals or reconsideration periods are complete and the permit documents are amended to incorporate any resulting changes, the City will mail the permit using return receipt requested mail to the Department of Ecology regional office and the Office of the Attorney General. Projects that require both Conditional Use Permits and or Variances shall be mailed simultaneously with any Substantial Development Permits for the project.

   1. The permit and documentation of the final local decision will be mailed together with the complete permit application; a findings and conclusions letter; a permit data form (cover sheet); and applicable SEPA documents.

   2. Consistent with RCW 90.58.140(6), the state's Shorelines Hearings Board twenty-one-day appeal period starts with the date of filing, which is defined below:

      a. For projects that only require a Substantial Development Permit: the date that Ecology receives the City decision.
      b. For a Conditional Use Permit (CUP) or Variance: the date that Ecology's decision on the CUP or Variance is transmitted to the applicant and City.
      c. For SDPs simultaneously mailed with a CUP or VAR to Ecology: the date that Ecology's decision on the CUP or Variance is transmitted to the applicant and the City.

8.8 Restoration Project Relocation of OHWM

The City may grant relief from Program development standards and use regulations when the following apply:

A. A shoreline restoration project causes, or would cause, a landward shift in the OHWM, resulting in the following:

1. Land that had not been regulated under this Program prior to construction of the restoration project is brought under shoreline jurisdiction; or

2. Additional regulatory requirements apply due to a landward shift in required shoreline buffers or other regulations of the Program; and

3. Application of Program regulations would preclude or interfere with use of the property permitted by local development regulations, thus presenting a hardship to the project proponent.

B. The proposed relief meets all of the following criteria:

1. The proposed relief is the minimum necessary to relieve the hardship.

2. After granting the proposed relief, there is net environmental benefit from the restoration project.

3. Granting the proposed relief is consistent with the objectives of the shoreline restoration project and consistent with the Program.

4. Where a shoreline restoration project is created as mitigation to obtain a development permit, the project proponent required to perform the mitigation is not eligible for relief under this Section.

C. The application for relief must be submitted to Ecology for written approval or disapproval. This review must occur during the Ecology's normal review of an SSDP, SCUP, or Shoreline Variance. If no such permit is required, then Ecology shall conduct its review when the City provides a copy of a complete application and all supporting information necessary to conduct the review.

1. Except as otherwise provided in Subsection D of this Section, Ecology shall provide at least twenty (20)-days' notice to parties that have indicated interest to Ecology in reviewing applications for relief under this Section, and post the notice on to their website.

2. Ecology shall act within thirty (30) calendar days of close of the public notice period, or within thirty (30) days of receipt of the proposal from the City if additional public notice is not required.

D. The public notice requirements of Subsection C of this Section do not apply if the relevant shoreline restoration project was included in this Program or shoreline restoration plan as defined in WAC 173-26-201, as follows:

1. The restoration plan has been approved by the Ecology under applicable Shoreline Master Program guidelines; and

2. The shoreline restoration project is specifically identified in the Shoreline Master Program or Shoreline Restoration Plan (Appendix D) or is located along a shoreline reach identified in the Shoreline Master Program or Shoreline Restoration Plan as appropriate for granting relief from shoreline regulations; and

3. The Shoreline Master Program or Shoreline Restoration Plan includes policies addressing the nature of the relief and why, when, and how it would be applied.

8.9 Enforcement

Any person failing to conform to the terms of a permit issued in accordance with the Program or who undertakes development on the shorelines of the state without first obtaining any permit required by the Program shall be subject to a civil penalty per WAC Sections 173-27-240 through 173-27-300 and the City of Kelso Municipal Code as it now exists or is subsequently amended.

8.10 Shoreline Activity Tracking

A. The City will track all shoreline permits and exemption activities to evaluate whether this SMP is achieving no net loss of shoreline ecological functions. Activities to be tracked using the City's permit system include development, conservation, restoration and mitigation, such as but not limited to:

1. New shoreline development;

2. Shoreline Variances and the nature of the variance;

3. Compliance issues;

4. Net changes in impervious surface areas, including associated stormwater management;

5. Net changes in fill or armoring;

6. Net change in linear feet of flood hazard structures; and

7. Net changes in vegetation (area, character).

Using the information collected in Subsection A, a no net loss report shall be prepared every eight years as part of the City's SMP evaluation or Comprehensive Plan Amendment process

to evaluate the cumulative effects of authorized development on shoreline conditions. Should the no net loss report show degradation of the baseline condition documented in the Shoreline Analysis Report, changes to the SMP and/or Shoreline Restoration Plan shall be proposed at the time of the eight-year update to prevent further degradation and address the

APPENDIX A

Background and Existing Conditions

Background and Existing Conditions

The City of Kelso is located at the confluence of the Columbia and Cowlitz Rivers, and includes a portion of the Coweeman River and a portion of Owl Creek. The western border is shared with the City of Longview. The City covers 8.4 square miles, with a population of 11,925, according to the 2010 US Census.

The Comprehensive Plan for the City of Kelso was adopted in 1980, with chapter updates in 1987, 1992, and 2015. Goals in the Comprehensive Plan are directed toward ensuring economic growth and security, public access, and environmental protection. The City is currently in the process of updating its Comprehensive Plan, including regulations applicable to environmentally sensitive areas outside the jurisdiction of the Shoreline Management Act.

The NWI identifies wetlands on approximately 53 percent of shoreline jurisdiction in the assessment unit. Within the City of Kelso city limits, levees occupy 65 percent of the total shoreline length, including 100 percent of the Cowlitz River shoreline upstream of the Coweeman River and the entire west bank of the Coweeman River downstream from Allen Street Road. These levees preclude functioning floodplains in much of the City; however, a portion of the Coweeman River within the City has an active floodway, as well as in Columbia Reach 20. In total, 69 percent of the shoreline area within the assessment unit is in the mapped floodplain, of which, an additional 9 percent is within the floodway.

The levees in Kelso are owned and maintained by Cowlitz County Drainage Improvement District No. 1 (North Kelso) and Cowlitz County Consolidated Diking District No 3 (South Kelso). Both Districts are in the process of having their levees certified by the US Army Corps of Engineers and are participating in the FEMA PAL program for provisionally accepted levees.

Shoreline Environmental Designation Map

Kelso City Limits
Parcels
Potential Wetland
Waterbody

Kelso Shoreline Environmental Designations

High Intensity
Urban Conservancy
Residential
Recreation
Aquatic

KS-01/KS-02
Boundary is co-located with boundary of wetland as determined by a wetland delineation. Approximately 175 ft.west of parcel R039204

KS-11/KS-12
Boundary is co-located with boundary of wetland as determined by a wetland delineation. Locacted within railroad ROW, approximately 65 feet east of western parcel line R039195.

KS-14/KS-15
Boundary follows and extends the location and direction of the northern parcel line of R039162.

KS-17/KS-18
Boundary is adjacent to the northernmost point of parcel R038764.

Note:
All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation, including wetland and ordinary high water mark delineation, may be needed to confirm/verify information shown on this map. A description of the boundary locations between SEDs is provided for areas where the SED change does not occur at a parcel boundary.

N

0 0.25 0.5 Miles

Parametrix

Analyst: J. Koloszar; Date:4/13/2016; File: \\Citynas\Users\mbusley\My Documents\ArcGIS\Packages\Cowlitz_County_Kelso_ShorelineDesignations_ToKelso_44B124AC-2705-48AF-85AA-61BC0714ECBE\v10\Cowlitz_County_Kelso_ShorelineDesignations_ToKelso.mxd

APPENDIX C

Shorelines Critical Areas Regulations

Shorelines Critical Areas Regulation

Appendices

This page intentionally left blank.

1. Introduction

All new uses and development activities proposed for shoreline areas in the City of Kelso must comply with the provisions of the Washington State Shoreline Management Act (RCW 90.58), the Washington Administrative Code (WAC 173-26 and 173-27), the updated Kelso Shoreline Master Program, and the Kelso Municipal Code. In addition, it is important to note that in many instances shoreline areas under the jurisdiction of the Shoreline Management Act (SMA) also involve environmentally sensitive areas, or critical areas, that are subject to protection under the provisions of the Washington State Growth Management Act (GMA). In those instances where the requirements of both the SMA and the GMA apply, the courts have ruled that the provisions of the SMA must prevail. As a result, any new use or development activity proposed for an area under the jurisdiction of the Shoreline Management Act that also involves one or more of the protected critical areas must also comply with the following regulations in this Appendix. For new uses and development activities outside of shoreline jurisdictional shoreline areas that involve critical areas, please refer to Chapter 18.20 of the Kelso Municipal Code.

1.1 Applicability.

All development activities, including new uses of land and buildings and changes of use, must comply with all provisions of this Chapter as well as all applicable provisions of local, state, and federal law.

A. Critical areas, subject to the provisions of this Appendix shall consist of:

1. Wetlands;
2. Geologically Hazardous Areas;
3. Fish and Wildlife Habitat Conservation Areas;
4. Frequently Flooded Areas; and
5. Critical Aquifer Recharge Areas.

B. It shall be the responsibility of property owners and applicants of proposed development activities to know the location of critical areas and jurisdictional shoreline areas on and near their property and to comply with the provisions of these regulations at all times.

1. Property owners and applicants that may be proposing development activities in proximity of critical areas are strongly encouraged to schedule an appointment to discuss the applicability of these regulations prior to preparing and submitting land use applications to the City.

2. The City shall maintain public maps that may assist in the identification of critical areas. However, it shall be the responsibility of the property owner or applicant to identify and map all critical areas on their property.

   a. The presence of a critical area and/or its associated buffer within jurisdictional shoreline areas on a parcel triggers the requirements of these regulations, regardless of whether or not a critical area or buffer is depicted on an official map.

C. All persons proposing development in critical areas or their buffers within shoreline jurisdictional areas shall obtain the appropriate shoreline permit(s) and City approvals pursuant to these regulations prior to beginning the development. Development exempt from the shoreline substantial development permit requirements pursuant to WAC 173-27-040 are still subject to the substantive requirements of this SMP and may be required to obtain a shoreline conditional use or variance permit, pursuant to Kelso SMP Chapter 8. Development activities shall include but are not limited to the following:

1. Removing, clearing, grading, excavating, disturbing, or dredging soil, sand, gravel, minerals, organic matter, or materials of any kind;
2. Dumping, discharging, or filling with any material, including discharges of storm water and domestic, commercial, or industrial wastewater;
3. Subdivisions, short subdivisions, planned unit residential developments (PURDs), mobile home parks, and recreational vehicle (RV) parks;
4. Construction, reconstruction, demolition, or expansion of any structure or infrastructure;
5. Construction of any new public or private road or driveway;
6. Destroying or altering vegetation through clearing, harvesting, cutting, intentional burning, shading, or planting non-native species where these activities would alter the character of a critical area or its buffer;
7. Draining, flooding, or disturbing the water level, duration of inundation, or water table;
8. Activities causing significant adverse changes in water temperature, physical or chemical changes of water sources to wetlands or surface water systems;
9. The driving of pilings;
10. The placing of obstructions;
11. Significant vegetation removal, provided that these activities are not part of a forest practice governed under Chapter 76.09 RCW and its rules;

12. Other uses or development that results in an ecological impact to the physical, chemical, or biological characteristics of wetlands; or

13. Activities reducing the functions of buffers.

1.2 Exclusions from the Critical Areas Regulations.

A. Critical Areas Exclusions. The following development, activities, and associated uses are not subject to the requirements of the critical areas regulations in this Appendix; however, the critical areas exclusions are not exemptions from the Shoreline Master Program or the Shoreline Management Act. Consistency with the Shoreline Master Program and the Act must be met, whether or not a permit is required.

1. Development occurring within a volcanic hazard area and containing no other critical area as defined by these regulations.

2. Installation, construction, or replacement of utility lines in improved rights-of-way, not including electric substations.

3. The removal or control of noxious weeds by non-mechanical means.

4. Regular landscape maintenance of ornamental ground cover or other vegetation in a critical area or buffer area, through replanting, trimming, or continued mowing, that was disturbed prior to the effective date of this Shoreline Master Program; provided, that no further disturbance is created.

5. Minimal site investigative work required by a city, state, or federal agency, or any other applicant, such as surveys, soil logs, percolation tests, and other related activities; provided impacts on critical areas are minimized and disturbed areas are restored to the pre-existing level of function and value within one year after tests are concluded.

6. Passive recreational uses such as sport fishing, scientific or educational review, or similar minimum-impact, non-development activities.

7. Maintenance of intentionally created artificial wetlands or surface water systems including irrigation and drainage ditches, grass-lined swales and canals, detention facilities and landscape or ornamental amenities. Wetlands, streams, lakes, or ponds created as mitigation for approved land use activities or that provide critical habitat are not exempt and shall be regulated according to the regulations herein and the associated mitigation plan, if applicable.

1.3 General Provisions.

A. Mitigation Sequencing. Property owners or applicants shall, when designing proposed new development activities that may potentially affect critical areas, use the following measures, listed in priority order, to avoid, minimize, and/or mitigate adverse impacts:

1. Avoiding the adverse impact altogether by not taking a certain action or parts of an action or moving the proposed action;

2. Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts;

3. Rectifying the adverse impact by repairing, rehabilitating, or restoring the affected environment;

4. Reducing or eliminating the adverse impact over time by preservation and maintenance operations during the life of the action;

5. Compensating for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments; and/or

6. Monitoring the impact and taking appropriate corrective measures.

B. Critical Areas reports. If the site of a proposed development includes, is likely to include, or is adjacent to a critical area, a critical areas report, prepared by a qualified professional, shall be required (see Appendix C-4 for details).

1. The cost of preparing any required critical areas report(s) shall be borne by the applicant.

2. Critical areas reports shall be prepared by a qualified professional(s) as defined in this SMP.

3. The cost of a professional peer review of any required critical areas report shall be borne by the applicant.

4. Individual critical areas reports may be combined with other required critical areas or shoreline reports, in a format approved by the City.

C. Additional Application Requirements. In addition to the application requirements identified in the City's Shoreline Master Program, Chapter 8, Shoreline Administration and Enforcement, the following application requirements shall be met:

1. It shall be the responsibility of property owners and applicants of proposed development activities to identify all critical areas and jurisdictional shoreline areas on their property and within 300 feet of their property lines on all application materials, including a required SEPA environmental checklist.

2. If a proposed development activity that may have a potential adverse impact on a critical area does not require a shoreline permit, compliance with the provisions of these regulations, the SMP, and the Shoreline Management Act is still required and a Shoreline Letter of Exemption shall be issued to ensure compliance.

3. All land use applications submitted to the City involving critical areas must include a SEPA Checklist and, at a minimum, such information identified in WAC 173-27-180.

D. Buffer Requirements.

1. In the event that more than one buffer applies to a proposed development, the buffer affording the highest level of protection should apply where the buffers overlap.

   a. For example, if a development proposal involves a parcel that includes a jurisdictional shoreline, a jurisdictional wetland, and a non-jurisdictional fish-bearing stream there could be three different buffer requirements applicable to the site. Where the buffer areas overlap, the widest buffer area would apply, unless a lesser buffer area is approved in accordance with the provisions of these regulations.

E. Emergency Measures to Protect the Public Health and Safety. Nothing in these regulations shall prevent a public agency or a private property owner from taking emergency actions necessary to protect persons and property from immediate or urgent threats to the public health and safety.

1. Emergency measures should be limited to reasonable measures necessary to protect the public health and safety from the immediate or urgent threat.

2. The City and state and federal agencies, such as the Washington State Department of Fish and Wildlife, should be contacted as soon as is practical after the emergency action to determine whether any additional measures are required and what, if any, after-the-fact permits may be required.

3. Remediation may be required after the fact to restore the site to pre-emergency conditions. Once the immediate threat has been addressed, any adverse impacts to critical areas shall be mitigated according to the provisions found in Section 6.1 of the SMP.

4. Property owners are advised that the failure to take appropriate preventive measures; the failure to secure required permits in advance; the failure to meet conditions of approval, including the maintenance of erosion-control measures; and/or the failure to act in a timely manner may not constitute an emergency and may result in the imposition of civil penalties and/or remediation measures.

F. Performance Bonds. In an effort to ensure the successful installation, operation, and maintenance of compensatory mitigation measures or other requirements under these regulations, the City may require a performance bond(s) or comparable financial guarantee.

1. The performance bond or guarantee may be up to 150% of the estimated cost of the required improvement.

2. The duration and form of the financial guarantee shall be determined by the City in consultation with the City Attorney.

1.4 Optional Incentives for Nondevelopment of Critical Areas.

A. Introduction. This Section describes the alternatives available to property owners and incentives they may pursue in lieu of developing or altering their property under the terms and standards of these regulations. The incentives and options listed allow property owners to use any or all of the options that best suit their needs. City staff review of a selected incentive option(s) will be undertaken with the advice and consent of the applicable state agency or agencies.

B. Conservation Easement. Any person who owns property containing an identified critical area as defined by these regulations shall be entitled to place a conservation easement over that portion of the property designated a critical area by naming the city or its qualified designee under RCW 64.04.130 as beneficiary of the conservation easement. The purpose of the conservation easement shall be to protect, preserve, maintain, restore, limit the future use of, or conserve for open space purposes, the land designated as critical area(s), in accordance with RCW 64.04.130. Details governing easement restrictions shall be negotiated between the property owners and the City.

C. Density Transfer. The City shall allow transfer of density for residential uses from lands containing critical areas within shoreline jurisdiction, as defined by these regulations, when developed pursuant to Chapter 16.36 of the Kelso Municipal Code, this SMP, and the Shoreline Management Act. Residential density may be transferred only from a critical area to an area on the same site that is not a critical area.

D. Density Credits. For development proposals on lands determined to contain critical areas as defined by these regulations, the City shall determine allowable dwelling units for residential development proposals based on the formula below:

Percentage of Site in Critical Area	Density Credit
1–30	90%
31–60	70%
61–90	50%

The density credit can be applied only within the development proposal site. The applicant may reduce lot sizes below the minimum required for that zoning district (RSF, RMF) to accommodate the transfer of density, but it cannot change the residential uses permitted in the zone.

Example: Size of proposed development site is 10 acres. Zone is RSF-15 Residential Single Family. Lot size is 15,000 square feet or 2.9 units per acre. (10 acres is 435,600 square feet; 435,600 divided by 15,000 square feet equals 29 lots). There are three acres of critical areas on the 10-acre site, or 30 percent of the total site area. The density credit according to the above table is 90 percent. The allowable adjustment is 29 lots multiplied by 90 percent, which equals 26 lots on the remaining seven acres. Note: without the density credit, the developer would exclude the three-acre critical area from development. The site would be seven acres at 15,000 square feet, and would allow 20 lots.

1.5 Permits.

No separate critical areas permit is required for a development proposal that requires a shoreline development permit. All applicable critical areas requirements in Appendix C shall be incorporated into a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, Shoreline Variance, or Shoreline Letter of Exemption as applicable, and the applicable shoreline permit or exemption shall be obtained prior to undertaking any development activity regulated by the SMP.

1.6 Relationship to Other Regulations.

A. These critical areas regulations shall apply within shoreline jurisdiction in addition to zoning and Shoreline Environment Designations adopted by the City.

B. Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection to the critical areas involved. When any provision of these regulations or any other existing regulation, easement, covenant, or deed restriction conflicts with these regulations, that which provides the most protection to the critical areas shall apply.

C. These critical areas regulations shall apply concurrently with review conducted under this SMP and State Environmental Policy Act (SEPA), as locally adopted. Any conditions required pursuant to these regulations shall be included in the SEPA review and threshold determination and any required shoreline permit.

2. Critical Area Wetlands

A. Identification of wetlands and delineation of their boundaries pursuant to these regulations shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas both within the City and within the shoreline jurisdiction, per RCW 90.58, meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of these regulations. Wetland delineations are valid for five (5) years; after such date the City shall determine whether a revision or additional assessment is necessary.

B. Wetland Rating. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029), or as revised. The descriptions of wetland categories according to the Rating System are as follows:

1. **Category I.** Category I wetlands are: (1) relatively undisturbed estuarine wetlands larger than 1 acre; (2) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (3) bogs; (4) mature and old-growth forested wetlands larger than 1 acre; (5) wetlands in coastal lagoons; (6) interdunal wetlands that score 8 or 9 habitat points and are larger than 1 acre; and (7) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (1) represent unique or rare wetland types; (2) are more sensitive to disturbance than most wetlands; (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (4) provide a high level of functions.

2. **Category II.** Category II wetlands are: (1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; (2) interdunal wetlands larger than 1 acre or those found in a mosaic of wetlands; or (3) wetlands with a moderately high level of functions (scoring between 20 and 22 points).

3. **Category III.** Category III wetlands are: (1) wetlands with a moderate level of functions (scoring between 16 and 19 points); (2) can often be adequately replaced with a well-planned mitigation project; and (3) interdunal wetlands between 0.1 and 1 acre. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

4. **Category IV.** Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These

wetlands may provide some important functions, and should be protected to some degree.

C. Development Limitations—Alterations of Wetlands. Alteration of all wetlands shall be fully mitigated and not be allowed unless mitigation sequencing has been followed. Regulated development shall conform with and be governed by the following:

1. Alteration of Category I wetlands is prohibited unless the alteration would improve habitat to threatened or endangered species occupying the habitat. This improvement of both functions and values must be demonstrated within the wetland critical areas report and the mitigation plan. A qualified expert may use best professional judgment to design a plan to allow such alterations to Category I wetlands.

2. Alteration of Category II wetlands may be allowed only when it is demonstrated by a qualified expert through a wetlands site assessment that any of the following criteria are met:

    a. Public benefit will accrue through the alteration, and no reasonable and practical alternative to the alteration exists through on-site design or through acquisition of additional area; or

    b. The alteration would enhance or maintain the existing wetland function and value, or the alteration would create a higher value or less common wetland type, which would improve the function or value of the wetland as indicated within the wetland critical areas report and the mitigation plan.

3. Alteration of Category III wetlands may be allowed only when it is demonstrated through a wetlands site evaluation that any of the following criteria are met:

    a. Public benefit will accrue through the alteration and absence of reasonable practicable alternative.

    b. No reasonable and practical alternative to the alteration exists through on-site design.

    c. The impacts are fully mitigated.

4. Alteration of Category IV wetlands may be allowed if feasible alternatives cannot be identified during the site plan review process, state and federal regulatory agencies concur with allowing the alteration, and impacts are fully mitigated.

5. Activities Allowed in Wetlands. The activities listed below are allowed in wetlands, subject to all requirements in the Shoreline Master Program. These activities do not require submission of a critical areas report, except where such activities would result in a reduction or loss of the functions and values of a wetland or wetland buffer. These activities include:

a. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.

b. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops, and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

c. Enhancement of a wetland through the removal of nonnative, invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation using hand-held equipment with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

d. Educational and scientific research activities that do not degrade the critical area.

D. Wetland Buffers. Wetland buffers shall be designated in accordance the following:

1. Buffers are required for all wetlands. Wetland buffer widths are established in Table 1-A of this Section.

2. Buffer widths shall be measured perpendicular to the delineated boundaries of the regulated wetland and extend the required distance.

3. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community, or the buffer should be widened to ensure that adequate functions of the buffer are provided.

4. If an applicant chooses not to apply the mitigation measures in Table 1-B, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.

5. The authorization of variable buffer widths intended to protect the functions of the wetland shall be based on a wetland assessment conducted by a qualified wetland professional, to evaluate the impact of current and proposed land use on the wetland. Wetland functions include but are not limited to flood control

functions, ground and surface water aquifer recharge functions, and sediment retention and pollution control functions (refer to Subsection E of this Section for buffer averaging).

6. Wetland buffer widths intended to protect fish and wildlife habitat shall be based on Table 1-A.

7. Buffer widths can be reduced below the minimums when site-specific, abrupt topographical changes such as cliffs, or human-made features such as levees, dikes, railroads, or streets, indicate that extending the buffer beyond such features will not improve wetland protection.

Table 1-A. Wetland Buffer Requirements within Shoreline Jurisdiction

Wetland Category	Buffer width if wetland scores:			
	3-4 habitat points	**5 habitat points**	**6-7 habitat points**	**8-9 habitat points**
Category I: Based on total score	75 ft	Add 30 ft	Add 90 ft	Add 150 ft
Category I: Bogs and Wetlands of High Conservation Value	190 ft			
Category I: Forested	75 ft	Add 30 ft	Add 90 ft	Add 150 ft
Category II	75 ft	Add 30 ft	Add 90 ft	Add 150 ft
Category III	75 ft	Add 45 ft	Add 105 ft	Add 165 ft
Category IV	40 ft			

Buffer widths in Table 1-A require the mitigation measures below in Table 1-B, where applicable.

Table 1-B. Required measures to minimize impacts to wetlands in Shoreline Management Act Jurisdiction

Disturbance	Required Measures to Minimize Impacts
Lights	□ Direct lights away from wetland
Noise	□ Locate activity that generates noise away from wetland □ If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source □ For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-ft heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	□ Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered □ Establish covenants limiting use of pesticides within 150 ft of wetland

Disturbance	Required Measures to Minimize Impacts
	□ Apply integrated pest management
Stormwater runoff	□ Retrofit stormwater detention and treatment for roads and existing adjacent development □ Prevent channelized flow from lawns that directly enters the buffer □ Use low-intensity development techniques (per PSAT publication on LID techniques)
Change in water regime	□ Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	□ Use privacy fencing OR plant dense native vegetation to delineate buffer edge and to discourage disturbance □ Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	□ Use best management practices to control dust
Disruption of corridors or connections	□ Maintain connections to offsite areas that are undisturbed □ Restore corridors or connections to offsite habitats by replanting

E. Wetland Buffer Width Averaging

1. Buffer widths may be modified by averaging buffer widths or by enhancing buffer quality as set forth herein:

a. Buffer width averaging shall be allowed only where:

i. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower-rated area.

ii. The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.

iii. The total area of the buffer after averaging is equal to the area required without averaging.

iv. The buffer at its narrowest point is never less than either three-quarters of the required width or seventy-five (75) feet for Categories I and II, fifty (50) feet for Category III, and twenty-five (25) feet for Category IV, whichever is greater.

b. Averaging to allow reasonable use of a parcel may be permitted when all of the following are met:

i. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.

ii. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.

iii. The total buffer area after averaging is equal to the area required without averaging.

iv. The buffer at its narrowest point is never less than either three-quarters of the required width or seventy-five (75) feet for Categories I and II, fifty (50) feet for Category III, and twenty-five (25) feet for Category IV, whichever is greater.

2. Notwithstanding the reductions permitted in Subsections E.1.a and b of this Section, buffer widths shall not be reduced by more than twenty-five percent of the required buffer or to less than twenty-five (25) feet, whichever is wider.

3. The minimum buffer width stated in Table 1-A of this Section shall not be required to be increased more than one hundred twenty-five percent (buffer width times 1.25) when the qualified wetland professional determines, based upon a site-specific wetland analysis, that impacts on the wetland from a proposed development can be mitigated only by a greater buffer width. The standard wetland buffer width shall be increased:

a. When the adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or

b. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or

c. When the minimum buffer for a wetland extends into an area with a slope of greater than fifteen percent, the buffer shall be the greater of:

i. The minimum buffer for that particular wetland; or

ii. Twenty-five (25) feet beyond the point where the slope becomes fifteen (15) percent or less.

4. Required buffers shall not prevent all reasonable use of property. A shoreline variance from buffer width requirements may be granted provided that the applicant meets the variance criteria in WAC 173-27-170.

5. All shoreline variances shall be in accordance with the Shoreline Master Program and the Shoreline Management Act.

F. Activities Allowed in a Wetland Buffer Zone. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this Appendix C, provided they are not prohibited by any other applicable law and they are

conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

1. Passive Recreation Development Activity. Passive recreation facilities (such as constructed walkways, trails, and viewing platforms) designed and in accordance with an approved critical area assessment, including:

    a. Walkways and trails; provided, that those pathways are generally parallel to the perimeter of the wetland, are located in the outer 25 percent of the buffer area, are constructed with a surface that does not interfere with the soil permeability, and the surface of which is no more than five (5) feet wide. The design and construction of walkways and trails shall avoid impacts to established native woody vegetation. Raised boardwalks utilizing nontreated pilings are acceptable;

    b. Wildlife viewing structures less than 200 square feet.

2. Stormwater Management Facilities. Stormwater management facilities are not allowed in buffers of Category I or II wetlands. Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, may be allowed within the outer twenty-five (25) percent of the buffer of Category III or IV wetlands provided that:

    a. No other location is feasible; and

    b. The location of such facilities will not degrade the functions or values of the wetland.

3. Utility Transmission Facilities. Utility facilities which carry liquid petroleum products or any other hazardous substance as defined in Chapter 173-303 WAC may be permitted within wetland buffers only when demonstrated by a qualified professional that the design, location, and monitoring of the proposed facility will not cause adverse effects to the buffer or wetland.

4. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.

5. Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

G. Mitigation Standards.

1. All adverse impacts to wetlands and buffers as identified in the wetlands critical areas report shall be specified in a mitigation plan consistent with Kelso development standards, be prepared by a qualified expert, and be consistent with the standards outlined in Table 2.

Table 2. Wetland Mitigation Ratios within the jurisdiction of the Shoreline Management Act (RCW 90.58)

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement
Category I: Bog, Natural Heritage site	Not considered possible	Case by case	Case by case
Category I: Mature Forested	6:1	12:1	24:1
Category I: Based on functions	4:1	8:1	16:1
Category II	3:1	6:1	12:1
Category III	2:1	4:1	8:1
Category IV	1.5:1	3:1	6:1

2. Buffer Mitigation Ratios. Impacts to buffers shall be mitigated at a 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.

3. Mitigation Sequencing. Before impacting any wetland or its buffer, an applicant shall demonstrate that the following actions have been taken. Actions are listed in the order of priority:

   a. Avoid the impact altogether by not taking a certain action or parts of an action.

   b. Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

   c. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.

   d. Reduce or eliminate the impact over time by preservation and maintenance operations.

   e. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.

   f. Monitor the required compensation and take remedial or corrective measures when necessary.

4. Requirements for Compensatory Mitigation:

   a. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans--Version 1*, (Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised) and *Selecting Wetland Mitigation Sites Using a Watershed Approach* (Western Washington) (Publication #09-06-32, Olympia, WA, December 2009).

   b. Mitigation ratios shall be consistent with the ratios in Table 2.

   c. As an alternative to the ratios in Table 2, the Credit/Debit method may be used. To more fully protect functions and values, the City may allow mitigation based on the "credit/debit" method developed by the Department of Ecology in "*Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report*," (Ecology Publication #1006-011, Olympia, WA, March 2012), or as revised.

   d. The area where the mitigation occurred and any associated buffer shall be located in a critical area tract or a conservation easement.

   e. Monitoring. Mitigation monitoring shall be required for a period necessary to establish that performance standards have been met, but not for less than five years. If a scrub-shrub or forested vegetation community is proposed, monitoring may be required for ten years or more. The project mitigation plan shall include monitoring elements that ensure certainty of success for the project's natural resource values and functions. If the mitigation goals are not attained within the initial five-year period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals in the mitigation plan are achieved.

5. Wetland mitigation actions shall not result in a net loss of wetland areas except when the following criteria are met:

   a. The lost wetland area provides minimal functions and the mitigation action(s) results in a net gain in wetland functions as determined by a site-specific function assessment; or

   b. The loss of wetland area provides minimal functions as determined by a site-specific function assessment, and other replacement habitats provide greater benefits to the functioning of the watershed, such as riparian habitat restoration and enhancement.

6. Mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement, and shall provide similar wetland functions as those lost except when:

   a. The lost wetland provides minimal functions as determined by a site-specific function assessment and the proposed mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal watershed assessment plan or protocol; or

   b. Out-of-kind replacement will best meet formally identified regional goals such as replacement of historically diminished wetland types.

7. Mitigation Preference. Mitigation actions that require compensation by replacing, enhancing or substitution, shall occur in the following order of preference:

   a. Restoration (re-establishment and rehabilitation) of wetlands:

      i. The goal of re-establishment is returning natural or historic functions to a former wetland. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.

      ii. The goal of rehabilitation is repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

   b. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. Establishment results in a gain in wetland acres. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.

      If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the approval authority may authorize creation of a wetland and buffer upon demonstration by the applicant's qualified wetland scientist that:

      i. The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that creation of a wetland at the site will not likely cause hydrologic problems elsewhere;

      ii. The proposed mitigation site does not contain invasive plants or noxious weeds or that such vegetation will be completely eradicated at the site;

iii. Adjacent land uses and site conditions do not jeopardize the viability of the proposed wetland and buffer (e.g., due to the presence of invasive plants or noxious weeds, stormwater runoff, noise, light, or other impacts); and

iv. The proposed wetland and buffer will eventually be self-sustaining with little or no long-term maintenance.

c. Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement should be part of a mitigation package that includes replacing the altered area and meeting appropriate ratio requirements. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Applicants proposing to enhance wetlands or associated buffers shall demonstrate:

i. How the proposed enhancement will increase the wetland's/buffer's functions;

ii. How this increase in function will adequately compensate for the impacts; and

iii. How all other existing wetland functions at the mitigation site will be protected.

d. Preservation. Preservation of high-quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement, provided that a minimum of 1:1 acreage replacement is provided by re-establishment or creation. Ratios for preservation in combination with other forms of mitigation generally range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being altered and the quality of the wetlands being preserved.

Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

i. The area proposed for preservation is of high quality. The following features may be indicative of high-quality sites:

(A) Category I or II wetland rating (using the wetland rating system for Western Washington)
(B) Rare wetland type (for example, bogs, mature forested wetlands, estuarine wetlands)
(C) The presence of habitat for priority or locally important wildlife species.

(D) Priority sites in an adopted watershed plan.

ii. Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species.

iii. There is no net loss of habitat functions within the watershed or basin.

iv. Mitigation ratios for preservation as the sole means of mitigation shall generally start at 20:1. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost.

v. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by a land trust.

vi. The impact area is small (generally $<^1/_2$ acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland).

8. All mitigation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

9. Wetland Mitigation Banks.

a. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

i. The bank is certified under state rules;

ii. The City determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

iii. The proposed use of credits is consistent with the terms and conditions of the certified bank instrument.

b. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the certified bank instrument.

c. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the certified bank instrument. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

10. When an applicant proposes to alter or eliminate a regulated wetland, the applicant shall be required to replace or enhance the function and value of the wetland. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with Wetland Mitigation in Washington State – Part 2: Developing Mitigation

Plans (Versions 1), Ecology Publication #06-06-11b, Olympia, WA, March 2006 or as revised.

H. Mitigation bonding may be required at the discretion of the city staff to ensure design and construction of compensatory mitigation projects.

3. Fish and Wildlife Habitat Conservation Areas

A. Designation of Critical Fish and Wildlife Habitat Conservation Areas. Critical fish and wildlife habitat conservation areas are designated according to the classifications in the following table:

Classifications WAC 365-190-130	Description
(1) Areas with which state designated endangered, threatened, or sensitive species have a primary association. Example: Coweeman River	Areas which, if significantly altered, may reduce the likelihood that the species will reproduce over the long term. Habitats associated with these species are those identified by the Washington Department of Fish and Wildlife's Habitat and Species Maps, as amended. These habitats are designated as critical areas, where endangered, threatened, and sensitive species are verified to have a primary association.
(2) Species and habitats of local importance	Habitat: Unique or significant habitats which regionally rare wildlife species depend upon and that have high wildlife concentrations, including: 1. Caves, 2. Talus slopes, 3. Snag rich areas (outside forest practices). Species: Wildlife species which require protective measures for their continued existence due to their population status or sensitivity to habitat alterations or are highly valued by the local citizens. Species meeting the above criteria but not depending upon a habitat of local importance (as listed above) to meet criteria habitat needs are those documented, verified, and mapped in Cowlitz County.
(3) Smelt spawning areas.	The entire length of the Cowlitz River adjacent to the city of Kelso is smelt spawning territory.
(4) Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat.	Naturally occurring ponds with a surface area of less than twenty acres but greater than one acre. Naturally occurring ponds do not include ponds deliberately created from dry sites such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than three years' duration), and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.
(5) Waters of the state.	Waters of the state shall be those defined in WAC 222-16-030, Forest Practices Board, Definitions, with the following revisions: (a) Type S Water – all waters, as inventoried as “shorelines of the state” under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW including periodically inundated areas of their associated wetlands. (b) Type F Water – means segments of natural waters, which are not classified as Type S Water and have fish, wildlife, or human use. These are segments of natural water and periodically inundated areas of their associated wetlands. (c)Type Np Water – means all segments of natural waters within defined channels that are perennial nonfish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type Np Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. (d) Type Ns Water – means all segments of natural waters within defined channels that are not Type S, F, or Np Waters.

Classifications WAC 365-190-130	Description
	seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an aboveground channel system to Type S, F, or N Waters.
(6) Lakes, ponds, streams, and rivers planted with game fish by a governmental agency or tribal entity.	The Cowlitz River is planted with game fish by governmental agencies.
(7) State natural area preserves and natural resource conservation areas.	Currently, there are no natural resource conservation areas within the City of Kelso.
(8) Unintentionally created ponds.	Ponds with a surface area of less than twenty (20) acres, but greater than one (1) acre.

B. Development Performance Standards. Development or regulated activity shall conform to and be governed by the following items in this Section. Mitigation plans including most current, accurate, and complete scientific and technical information available should be developed by a qualified fish and wildlife biologist.

1. When impacts to critical fish and wildlife habitat cannot be avoided, the performance standards contained in this Section shall be used to develop plans submitted for regulated activities.
2. Consider habitat in site planning and design.
3. Locate buildings and structures in a manner that preserves the habitat or minimizes adverse impacts.
4. Consolidate habitat and vegetated open space in contiguous blocks, and where possible locate habitat contiguous to other habitat, open space or landscaped areas to contribute to a continuous system or corridor that provides connections to adjacent habitat areas.
5. Use native species in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers.
6. Emphasize heterogeneity and structural diversity of vegetation in landscaping.
7. Remove and/or control any noxious or undesirable species of plants.
8. Preserve trees to the extent possible, preferably in consolidated areas.
9. Preserve and introduce native plant species which serve as food, shelter from climatic extremes and predators, and structure and cover for reproduction and rearing of young for critical wildlife.
10. Preserve the natural hydraulic and ecological functions of drainage systems.

11. Preserve critical fish and wildlife habitat areas through maintenance of stable channels; adequate flow levels; and management of stormwater runoff, erosion, and sedimentation.

12. Manage access to critical fish and wildlife habitat areas to protect species that are sensitive to human disturbance.

13. Maintain or enhance water quality through control of runoff and use of best management practices.

C. Overlap of Critical Areas. Section 1.6, Relationship to Other Regulations, notwithstanding, if a fish or wildlife habitat classification is determined to be a wetland, the most protective measures will apply.

D. Habitat Management Plan—Classification 1 Only. A habitat management plan shall be required (Appendix C-5) if the regulated activity is within two hundred fifty feet of a Classification 1 habitat area, or identified within one thousand feet of a point location (nests, dens, etc.) for a Classification 1 habitat area. Areas identified landward of the dike are exempt from HMP requirements for aquatic species.

1. The habitat management plan will be prepared by a qualified expert in a format consistent with Appendix C-5.

2. Habitat management plans will be sent to the Washington State Department of Fish and Wildlife and other state and federal agencies with jurisdiction for comment with the SEPA checklist.

E. Habitat Protection for Classification 2. Protection for these habitat areas shall be through the development performance standards listed above.

F. Habitat Protection for Classifications 4, 5, and 6. Protection for these habitat areas shall be required through the Shoreline Management Act, the Federal Clean Water Act, and the State Hydraulic Code and/or best management practices. Within Classification 5, Type 1, 2, and 3 waters are regulated streams, as defined in WAC 222-16-030, Forest Practices Board, Definitions.

G. The stream typing system as provided in WAC 222-16-030 as hereafter amended shall be utilized for stream classification. The Department of Natural Resources stream classification maps shall be used to determine classification unless the critical areas report provides a basis for reclassification. The City may consult with the Department of Natural Resources and Washington Department of Fish and Wildlife to gain concurrence on any change in classification.

H. The following standard buffers shall apply to the waterbodies classified in F and G, above. Buffers shall be measured horizontally and perpendicular from the OHWM:

Table 3. Water Body Buffers within Shoreline Management Act Jurisdiction

Stream	RHA Buffer Width (feet)
Type S Water	Refer to Table 4
Type F Water (Type 2)	150
Type F Water (Type 3)	100
Type Np Water	50
Type Ns Water	50

Table 4. Reach-Specific Shoreline Buffers

Reach Number	Water Body	Shoreline Environment Designation	Buffer
KS-01	Columbia River	Urban Conservancy	150 ft. (Water-oriented) 200 ft. (Non-water-oriented)
KS-02	Columbia River	High-Intensity	100 ft. (Water-oriented) 150 ft. (Non-water-oriented)
KS-03	Cowlitz River	High-Intensity	100 ft. (Water-oriented) 150 ft. (Non-water-oriented)
KS-04	Cowlitz River	High-Intensity	From the OHWM to the boundary of the existing railroad right-of-way.
KS-05	Cowlitz River	Urban Conservancy	From the OHWM to the waterward toe of the levee.
KS-06	Cowlitz River	Residential	50 ft.
KS-07	Cowlitz River	Residential	From the OHWM to the waterward toe of the levee.
KS-08	Cowlitz River	High-Intensity	25 ft. (Water-oriented) 75 ft. (Non-water-oriented) From the OHWM to the waterward toe of the levee, as applicable.
KS-09	Cowlitz River	High-Intensity	From the OHWM to the waterward toe of the levee.
KS-10	Cowlitz River	High-Intensity	From the OHWM to the waterward toe of the levee.
KS-11	Owl Creek	High-Intensity	150 ft.
KS-12	Owl Creek	Urban Conservancy	From the OHWM to the boundary of the right-of-way.
KS-13	Owl Creek	High-Intensity	From the OHWM to the boundary of the right-of-way.
KS-14	Coweeman River	High-Intensity	From the OHWM to the waterward toe of the levee.
KS-15	Coweeman River	High-Intensity	From the OHWM to the waterward toe of the levee.
KS-16	Coweeman River	High-Intensity	50 ft.

Reach Number	Water Body	Shoreline Environment Designation	Buffer
KS-17	Coweeman River	Urban Conservancy	200 ft.
KS-18	Coweeman River	High-Intensity	From the OHWM to the Boundary of the right-of-way.
KS-19	Coweeman River	Residential	100 ft.
KS-20	Coweeman River	Residential	100 ft.
KS-21	Coweeman River	Residential	100 ft.
KS-22	Coweeman River	High-Intensity	From the OHWM to the waterward toe of the levee.
KS-23	Coweeman River	Urban Conservancy	From the OHWM to the waterward toe of the levee.
KS-24	Coweeman River	Residential	From the OHWM to the waterward toe of the levee.
KS-25	Coweeman River	Residential	150 ft.; Or, from the OHWM to the waterward toe of the levee, as applicable.

I. Buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

J. Buffer averaging may be allowed where the applicant demonstrates:

1. **There are no feasible alternatives to the site design that could be accomplished without buffer averaging;**
2. **Within the existing buffer there are areas with significant differences in characteristics that affect its habitat functions and would not be addressed by revegetation;**
3. **The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the water body and decreased adjacent to the lower functioning or less sensitive portion;**
4. **The buffer averaging does not reduce the functions or values of the water body or riparian habitat, or the buffer averaging, in conjunction with vegetation enhancement, increases the habitat function;**
5. **The total area of the buffer after averaging is equal to the area required without averaging and all increases in buffer dimension for averaging are generally parallel to the water's edge; and**

6. The buffer at its narrowest point is never less than seventy-five (75) percent of the required width; unless an existing human improvement that cannot be feasibly relocated is located closer to the water body.

K. The following uses are allowed in water body buffers and building setbacks in all SEDs consistent with Table 7-1 of the SMP, provided that mitigation sequencing is demonstrated and any adverse impacts to ecological functions are mitigated.

1. Water-dependent uses. Water-dependent uses, modifications and activities, including public access, may be located in shoreline buffers at the water's edge without obtaining a Shoreline Variance, provided the project submittal includes a Critical Area Report (see Appendices C-1 through C-4 of this Appendix C), and the project otherwise complies with this Program.

2. Accessories to water-dependent uses (not including parking lots). Uses, developments and activities accessory to water-dependent uses shall be located outside any applicable standard or reduced shoreline buffer unless at least one of the following is met:

   a. Proximity to the water-dependent project elements is critical to the successful implementation of the facility's purpose and the elements are supportive of the water-dependent use (e.g., a road to a boat launch facility);

   b. Recreational development with a primary use to access or enjoy the water is already legally established in parks or on other public lands, and the proposed accessory use does not conflict with or limit opportunities for other water-oriented uses; or

   c. The primary water-dependent use or activity is located on a parcel entirely or substantially encumbered by the required buffer.

   In these circumstances, uses and modifications accessory to water-dependent uses must be designed and located to minimize intrusion into the buffer. All other accessory uses, developments and activities proposed to be located in a shoreline buffer must obtain a Shoreline Variance unless otherwise allowed by other regulations in this Section or in this SMP.

3. Shoreline residential access. A private access pathway constructed of pervious materials may be installed, a maximum of four (4) feet wide, through the shoreline buffer to the OHWM. Impervious materials may be used only as needed to comply with ADA requirements to construct a safe, tiered pathway down a slope. A railing may be installed on one edge of the pathway, a maximum of 36 inches tall and of open construction. Pathways to the shoreline should take the most direct route feasible consistent with any applicable ADA standards.

4. Linear transportation and utility crossings. New linear transportation and utility crossings may be located in shoreline buffers without obtaining a Shoreline Variance, provided the project complies with all other provisions of this Program.

L. Habitat Protection for Classification 7 (see Section 3.A). Protection for state natural area preserves and natural resource conservation area habitats will be achieved through assistance from the Washington State Department of Natural Resources, Department of Fish and Wildlife, and the Department of Ecology.

M. Habitat Protection for Classification 8 (see Section 3.A). Protection for habitat provided by unintentionally created ponds shall be through Section 1.2, Exclusions from the Critical Areas Regulations.

4. Frequently Flooded Critical Areas

A. Frequently Flooded Area Classifications and Designation. All lands identified in Section 18.12.070 of the Kelso Municipal Code, as amended, and approved by the City, as within the one-hundred-year floodplain are designated as frequently flooded areas.

B. Development Limitations. All development within designated frequently flooded areas shall comply with Chapter 18.12 of the Kelso Municipal Code (KMC), in effect on the date that this SMP was formally approved by the Department of Ecology, with the exception that development subject to KMC 18.12.320(B) must also be demonstrated to:

   1. Not cause further limitation of channel migration; and

   2. Include appropriate protection of ecological functions.

5. Geologic Hazard Areas

This Section acknowledges the application of other relevant codes and regulations, which may require mutual compliance.

A. For all regulated activities proposed within designated landslide, erosion, seismic and mine hazard areas, a geotechnical assessment or an erosion hazard assessment prepared by a qualified expert shall be submitted and coordinated with International Building Code requirements. (See Appendices C-1 and C-2.)

B. If the geotechnical assessment indicates an inability of the site to accommodate the proposed activity without special measures or precautions as determined by a qualified expert, the City may require a geotechnical report. (See Appendix C-3.)

C. The following define the different types of geologic hazard areas:

1. Erosion Hazard Areas. Erosion hazard areas are those areas identified by the presence of soils that are recognized as having a severe erosion hazard by the Natural Resources Conservation Service, Cowlitz Area, Washington.

2. Landslide Hazard Areas. Landslide hazard areas are those areas meeting any of the following criteria:

a. Areas of historic failure, such as areas designated as quaternary slumps, earthflows, mudflows, or landslides;

b. Any area with the following:

i. Steep hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock, that has or exhibits evidence of springs or groundwater seepage;

ii. Slopes that are parallel or sub-parallel to planes of weakness, such as bedding planes, joint systems, and fault planes;

iii. Slopes having gradients greater than eighty percent and subject to rock fall during seismic shaking;

iv. Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;

v. Areas located in a canyon, on an active alluvial fan, or that are presently subject to inundation by debris flows or catastrophic flooding;

vi. Areas identified as being medium or high probability of slope instability based on Washington State Department of Natural Resources soils based stability model or the most current map adopted by the city and filed with the city clerk;

vii. Areas identified as being medium or high probability of slope instability based on field visits along with reasonable assumption of city planning staff or other qualified experts with localized knowledge of present site conditions.

3. Seismic Hazard Areas. For the purposes of this classification, a seismic hazard area is any area indicated by a zone 2B or higher rating as defined by the Seismic Risk Map of the United States, adopted by the Washington State Legislature and defined in the International Building Code (IBC/IRC).

4. Mine Hazard Areas. For the purposes of this classification mine hazard areas are:

a. Abandoned mines and/or workings where locations are known.

b. Abandoned mines and/or workings where exact locations are unknown, but based upon the best available information there is good cause to believe it is within an area that may be reasonably delineated.

5. Volcanic Hazard Areas. For the purposes of this classification, all volcanic mudflow hazard areas shall be identified as the five-hundred-year floodplain areas identified in FEMA maps.

D. Development within geologic hazard areas shall meet the following requirements:

1. Development Standards for Landslide Hazard Areas and Erosion Hazard Areas. Any allowed or regulated activity on areas identified as landslide or erosion hazards or their buffers shall conform to the following standards:

a. Buffers.

i. An undisturbed fifty-foot buffer, as measured on the surface, is required from the top, toe, and along all sides of any existing landslide or eroded area, within a critical area;

ii. Based on the results of the geotechnical assessment, the director may increase or decrease the buffer or require additional areas including buffers as indicated; and

iii. The buffer shall be clearly staked before and during any construction or clearing.

b. General Design Guidelines.

i. Structures should be clustered where possible to reduce disturbance and removal of vegetation;

ii. Foundations should conform to the natural contours of the slope; and

iii. Roads, walkways, and parking areas should be designed to parallel the natural contours of the site.

c. Grading.

i. Clearing, grading, and other construction activities shall not aggravate or result in slope instability or surface sloughing;

ii. Undergrowth shall be retained to the maximum extent feasible;

iii. No dead vegetation (slash), fill, or other foreign material shall be placed within a landslide or erosion hazard area, other than that approved for bank stabilization or if such fill is consistent with authorized activities specified in a geotechnical report; and

iv. Minimize ground disturbance to the maximum extent feasible by not allowing clearing from May 1st to October 1st of every year.

d. Erosion Control.

i. There shall be minimum disturbance of trees and vegetation in order to reduce erosion and maintain existing stability of hazard areas;

ii. Vegetation removal on the slopes of banks between the ordinary high water mark and the top of the banks shall be minimized because of the potential for erosion;

iii. Vegetation and organic soil material shall be removed from fill site prior to the placement of fill;

iv. Thinning of limbs of individual trees is preferred over tree removal as a means to provide a view corridor; and

v. Vegetative cover or engineered ground covers shall be placed on any disturbed surface to the extent feasible.

e. Drainage.

i. Surface drainage, including downspouts, shall not be directed across the face of a hazard area. If drainage must be discharged from the top of a hazard area to its toe, it shall be collected above the top and directed to the toe by tight line drain, and provided with an energy-dissipating device

at the toe for discharge to a swale or other acceptable natural drainage areas; and

ii. Stormwater retention and detention systems, including percolation systems utilizing buried pipe, require a geotechnical assessment that indicates such a system shall not affect slope stability and require the systems to be designed by a licensed civil engineer. The licensed civil engineer shall also certify that the systems are installed as designed.

f. Sewage Disposal System Drainfields. For the purpose of landslide or hazard areas, the sewage disposal drainfields shall be located outside of the hazard area buffer, unless otherwise justified by a qualified geotechnical engineer. The septic system drainfield must be in compliance with all local government health regulations.

2. Development Standards—Seismic Hazard Areas. All development within areas that meet the classification for seismic hazard areas shall comply with the International Building Code. A critical areas permit is not required by these regulations for seismic hazards.

3. Development Standards—Mine Hazard Areas. Development adjacent to a mine hazard area is prohibited unless the applicant can demonstrate the development will be safe. If a proposal is located adjacent to a mine hazard area, a geotechnical assessment may be required.

4. Development Standards—Volcanic Hazard Areas. Development shall comply with existing Federal Emergency Management Agency regulations for floodplain management. A critical areas permit is not required by these regulations for development in a volcanic hazard area.

5. Designations. Lands in the city meeting the classification criteria for geologic hazard areas are hereby designated, under RCW 36.70A, as geologic hazard areas designated on the city's geologic hazard map.

6. Critical Aquifer Recharge Areas

A. Classification—Critical Aquifer Recharge Areas

1. For the purposes of this classification, the critical aquifer recharge areas are determined by the combined effects of soil types and hydrogeology. (Critical Aquifer Recharge Map, Cowlitz-Wahkiakum Council of Governments, 1993).

2. High Susceptibility. Areas, identified on the aquifer recharge map, with a very high susceptibility to contamination of the underlying aquifer due to high soil permeability and high water table.

B. Regulated Activities. The following activities are regulated in critical aquifer recharge areas located within jurisdictional shoreline areas:

1. Aboveground and Underground Storage Tanks and Vaults. Aboveground or underground storage tanks or vaults for the storage of hazardous substances or dangerous wastes as defined in WAC 173-303, Dangerous Waste Regulations, or any other substances, solids, or liquids in quantities identified by the county health department, consistent with WAC 173-303, as a risk to groundwater quality shall conform to the Uniform Fire Code, WAC 173-360, and underground storage tank regulations.

2. Utility Transmission Facilities. Utility facilities that carry liquid petroleum products or any other hazardous substance as defined in WAC 173-303.

3. Land Divisions. Subdivisions, short subdivisions and other divisions of land will be evaluated for their impact on groundwater quality within the aquifer recharge areas. The following measures may be required:

   a. An analysis of the potential contaminate loading;

   b. Alternative site designs, phased development and/or groundwater quality monitoring;

   c. Open spaces within development proposals; and/or

   d. Community/public water systems and community drainfields.

C. Hydrogeologic Testing and Site Evaluation.

1. Hydrogeologic testing and site evaluation may be required for any regulated activity. If federal or state regulations require hydrogeologic testing, the City may waive the requirement for additional testing; provided, the director has adequate factual information to evaluate the proposal.

2. If hydrogeologic testing and site evaluation are required, they shall be conducted by a qualified expert and must include but not be limited to the requirements in Appendix C-6.

3. Development that negatively impacts the quality of critical aquifer recharge areas shall be prohibited unless the hydrogeologic testing and site evaluation satisfactorily demonstrate that significant adverse impacts will be mitigated.

7. Mitigation Plan Performance Standards

All critical areas mitigation projects required pursuant to these regulations either as a permit condition or as the result of an enforcement action shall follow a mitigation plan approved by the City and prepared by a qualified expert on behalf of the applicant.

A. Mitigation in order of preference is as follows:

1. Avoiding the impact altogether by not taking a certain action or parts of actions;
2. Minimizing impacts by limiting the degree or magnitude of an action and its implementation;
3. Rectifying impacts by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating an impact over time by preservation and maintenance operations during the life of the action; and
5. Compensating for an impact by replacing or providing substitute resources or environments.

B. When a mitigation plan is required it shall be approved by the City prior to any site disturbance. The City may seek assistance from resource agencies prior to making a decision. At a minimum the plan shall meet the following standards:

1. The mitigation plan shall be prepared by qualified expert and shall be acceptable to the City;

a. The mitigation plan shall include:

i. An assessment of the existing function and values of the critical area;

ii. The functions and values that will be lost; and

iii. The critical area's expected functions and values after mitigation.

b. Objectives shall be stated in measurable terms, if feasible;

c. The mitigation plan shall specify and describe how functions and values will be replaced;

d. The mitigation plan shall include provisions for monitoring the mitigation area as reasonably necessary to determine whether stated objectives have been accomplished. A contingency plan shall be included in the event the stated objectives are not accomplished;

e. Mitigation shall be provided on-site, except where on-site mitigation is not scientifically feasible, economical, or practical due to physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site;

f. When mitigation cannot be provided on-site, mitigation shall be provided in the immediate vicinity of the permitted activity on property owned or controlled by the applicant where such mitigation is practical and beneficial to the critical area and associated resources. Where possible, this means within the same hydrologic unit as the location of the proposed project; and

g. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advance mitigation.

C. Restoration shall be required when a critical area has been altered prior to project approval.

APPENDIX C-1 — Geotechnical Assessments

A. The applicant must submit a geotechnical assessment prepared by a qualified expert.

B. The geotechnical assessment shall typically include at a minimum the following:

1. A discussion of the surface and subsurface geologic conditions of the site;

2. A site plan of the area delineating all areas of the site subject to landslide hazards based on mapping and criteria; and

3. A contour map of the proposed site, at a reasonable scale (not smaller than one inch equals two hundred feet) which clearly delineates slopes for ranges between fifteen and twenty-nine percent and thirty percent and greater, and includes figures for area coverage of each slope category on the site. If any springs or seeps are present, their location should be indicated on the map.

C. Site Evaluation. Evaluation of the ability of the site to accommodate the proposed activity.

APPENDIX C-2 —Erosion Hazard Assessments (Stream/Hillsides)

The applicant must submit an erosion hazard assessment prepared by a qualified expert.

A. The erosion hazard assessment shall typically include, at a minimum, the following:

1. An overview of existing channel characteristics and stream hydraulics at the subject property;

2. An assessment of the probability for stream induced erosion to occur on the subject property and the estimated extent of the property that would be affected;

3. A site map of the property, drawn to scale, delineating the relationship of the stream to the property, and existing erosion areas and/or potential erosion areas, and the proposed development, including structural dimensions;

4. A cross-section map, drawn to scale and at five-foot contour intervals from the edge of the river's surface to the furthest landward boundary of the property, and including the proposed development; and

5. Site Evaluation. Evaluation of the ability of the site to accommodate the proposed activity.

B. Hillsides. In addition to the basic critical area report requirements, a critical area report for an erosion hazard or landslide hazard area associated with hillsides shall include the following information at a minimum:

1. Site Plan. The report shall include a copy of the site plan for the proposal showing:

   a. The height of slope, slope gradient, and cross section of the project area;

   b. The location of springs, seeps, or other surface expressions of groundwater on or within two hundred feet of the project area or that have potential to be affected by the proposal. A distance of two hundred feet is suggested so that geological features that might affect the proposal are included in the critical area report. It may be necessary to include features further than two hundred feet from the project area in some instances, such as a series of related geological features that extend more than two hundred feet; and

   c. The location and description of surface water runoff.

2. Geotechnical Analysis. The geotechnical analysis shall specifically

include: a. A description of the extent and type of vegetative cover;

b. An estimate of load capacity including surface and groundwater conditions, public and private sewage disposal systems, fills and excavations and all structural development;

c. An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;

d. An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one-hundred-year storm event;

e. Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties;

f. A study of slope stability including an analysis of proposed angles of cut and fill and site grading;

g. Recommendations for building limitations, structural foundations, and an estimate of foundation settlement; and

h. An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion.

6. Erosion and Sediment Control Plan. For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in the locally adopted stormwater management regulations.

7. Drainage Plan. The report shall include a drainage plan for the collection, transport, treatment, discharge and/or recycle of water prepared in accordance with the locally adopted surface water management plan. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area.

8. Mitigation Plans. Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan and/or other means for maintaining long-term soil stability.

9. Monitoring Surface Waters. If the community development director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the critical area report shall include a plan to monitor the surface water discharge from the site.

The monitoring plan shall include a recommended schedule for submitting monitoring reports to the city of Kelso.

APPENDIX C-3—Geotechnical Report

The geotechnical report shall typically include at a minimum the following. Technical justification shall be provided where the qualified expert does not deem any information applicable.

A. Site Geology Information Required.

1. Topographic Data. Contour map of proposed site at a scale of one inch equals two hundred feet, which clearly delineates the slopes between fifteen and twenty-nine percent and thirty percent and greater, including figures for area coverage of each slope category on the site.

2. Subsurface Data. Boring logs and exploratory methods, soil and rock stratigraphy, groundwater levels including seasonal changes.

3. Site History. Description of any prior grading, soil instability, or slope failure.

4. Seismic Hazard. Data concerning the vulnerability of the site to seismic events.

B. Geotechnical Engineering Information Required.

1. Slope stability studies and opinion of slope stability;

2. Proposed angles of cut and fill slopes and site grading requirements;

3. Structural foundation requirements and estimated foundation settlements;

4. Soil compaction criteria;

5. Proposed surface and subsurface drainage;

6. Lateral earth pressures;

7. Erosion vulnerability of site;

8. Suitability for fill;

9. Laboratory data and soil index properties for soil samples; and

10. Building limitations.

C. Site Evaluation. Evaluation of the ability of the site to accommodate the proposed activity.

Where a valid geotechnical report has been prepared within the last five years for a specific site, and where the proposed activity and surrounding site conditions are unchanged, said report may be utilized and a new assessment may not be required.

APPENDIX C-4 —Wetland critical areas report

A wetland critical areas report shall include the following. If the qualified expert deems any of the following information to be inapplicable, he or she shall provide technical justification.

A. Narrative. The report narrative must include all of the following:

1. The name and contact information of the applicant;
2. The name, qualifications, and contact information of the primary author(s) of the wetland critical area report;
3. Location information (legal description, parcel number and address);
4. Site characteristics, including topography, total acreage, delineated wetland acreage, other water bodies, vegetation, soil types, etc.;
5. Identification and characterization of all critical areas, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information;
6. Identification of the wetland's rating as defined in these regulations;
7. Analysis of functions and values of existing wetlands and buffers, including flood control, water quality, aquifer recharge, fish and wildlife habitat, and hydrologic characteristics;
8. A complete description of the proposed project and its potential impacts, including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey, and any impacts due to hydroperiod alterations;
9. Discussion of project alternatives, including any feasible options for total avoidance of impacts to wetland areas and buffers;
10. A wetland buffer width recommendation and rationale for all wetlands on or adjacent to the site, if different from buffers required in these regulations;
11. If mitigation for wetland impacts is proposed, a description and analysis of that mitigation; and
12. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions.

B. Vicinity map drawn to scale and including a north arrow, public roads, and other known landmarks in the vicinity.

C. National Wetlands Inventory Map (U.S. Fish and Wildlife Service) and/or a Cowlitz County wetland inventory map identifying wetlands on or adjacent to the site.

D. Site map drawn to a usable scale, one inch equals one hundred feet or better, and including a north arrow and all of the following requirements:

1. Site boundary/property lines and dimensions;
2. Wetland boundaries based upon a qualified wetland professional's delineation, and depicting sample points and differing wetland types if any;
3. Recommended wetland buffer boundary;
4. Buffers for off-site critical areas that extend onto the project site;
5. Internal property lines such as rights-of-way, easements, etc.;
6. Existing physical features of the site, including buildings and other structures, fences, roads, utilities, parking lots, etc.;
7. The location of the development proposal, including grading and clearing limits; and
8. Topographical variations.

E. An on-site wetland delineation report, including data sheets, prepared by a qualified expert. The wetland boundaries shall be staked and flagged. The report shall include:

1. A description of the methodologies used to conduct the wetland delineations and ratings, including references;
2. Photos documenting that the wetland boundaries have been staked and flagged; and
3. Wetland rating forms, including a description of and score for each function, per Wetland Ratings Section (Section 2.B) of these regulations; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and estimates for entire wetland area including off-site portions, if field delineation of the off-site portion is infeasible); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlets/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site;

F. Documentation of any other field work performed on the site, e.g., baseline hydrologic data, etc.

G. A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:

1. Maps (to scale) depicting delineated and surveyed wetland and required buffers on site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; grading and clearing limits; and areas of proposed impacts to wetlands and/or buffers (include square footage estimates).

2. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas.

APPENDIX C-5 —Habitat Management Plan Requirements

At a minimum, the habitat management plan shall typically contain the following information. Technical justification shall be provided where the qualified expert does not deem any information applicable.

A. A description of state or federally designated endangered, threatened or sensitive fish or wildlife species, or species of local importance, on-site or adjacent to the subject property within a distance typical of the normal range of the species.

B. A description of the critical wildlife habitat for the identified species known or expected to be located on-site or immediately adjacent to the subject property.

C. A site plan that clearly identifies and delineates critical fish and wildlife habitats found on-site or immediately adjacent to the subject property.

D. An evaluation of the project's effects on critical fish and wildlife habitat both on and adjacent to the subject property.

E. A summary of any federal, state, or local management recommendations that have been developed for the critical fish or wildlife species or habitats located at the site.

F. A statement of measures proposed to preserve existing habitats and restore area degraded as a result of proposed activities.

G. A description of proposed measures that mitigate the impacts of the project.

H. An evaluation of ongoing management practices which will protect critical fish and wildlife habitat after the project site has been fully developed, including proposed monitoring and maintenance programs of the subject property.

APPENDIX C-6 —Hydrogeologic Testing and Site Evaluation

If hydrogeologic testing and site evaluation are required, they shall be conducted by a qualified expert and typically include at least the following. Technical justification shall be provided where the qualified expert does not deem any information applicable.

A. A characterization of the site and its relationship to the aquifer and evaluation of the ability of the site to accommodate the proposed activity.

B. A discussion of the effects of the proposed project on groundwater quality and quantity.

C. Recommendations on appropriate mitigation, if any, to assure that there shall be no significant degradation of groundwater quality or quantity.

D. In addition, the testing and evaluation must include, but not be limited to, an analysis of:

    1. Geologic setting and soils information of site and surrounding area.

    2. Water quality data, including pH, temperature, conductivity, nitrates, and bacteria.

    3. Location and depth to perched water tables.

    4. Recharge potential of facility site (permeability/transmissivity).

    5. Local groundwater flow, direction and gradient.

    6. Surface water locations within one thousand feet of the site.

APPENDIX D

Shoreline Restoration Plan

COWLITZ COUNTY
Grant No. G1200052

SHORELINE RESTORATION PLAN

for Shorelines in Cowlitz County and the Cities of Castle Rock, Kalama, Kelso, and Woodland

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

Prepared for:
Cowlitz –Wahkiakum Council of Governments
207 4th Avenue North
Kelso, WA 98626

Prepared by:

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland . WA 98033
p 425.822.5242
f 425.827.8136
watershedco.com

Finalized April 2015, Edited June 2015

The Watershed Company Reference Number:
110922

This report was funded in part through a grant from the Washington Department of Ecology.

The Watershed Company Contact Person:
Dan Nickel / Sarah Sandstrom

Cite this document as:

The Watershed Company. June 2015. Shoreline Restoration Plan for Shorelines in Cowlitz County and the Cities of Castle Rock, Kalama, Kelso, and Woodland. Prepared for the Cowlitz-Wahkiakum Council of Governments, Kelso, WA.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SHORELINE RESTORATION PLAN

COWLITZ COUNTY AND THE CITIES OF CASTLE ROCK, KALAMA, KELSO, AND WOODLAND

1. INTRODUCTION

The Shoreline Restoration Plan builds on the goals and policies proposed in the Shoreline Master Program (SMP). The Shoreline Restoration Plan provides an important non-regulatory component of the SMP to ensure that shoreline functions are maintained or improved despite potential incremental losses that may occur in spite of SMP regulations and mitigation actions.

The Shoreline Restoration Plan draws on multiple past planning efforts to identify possible restoration projects and reach-based priorities, key partners in implementing shoreline restoration, and existing funding opportunities. The Shoreline Restoration Plan represents a long-term vision for voluntary restoration that will be implemented over time, resulting in ongoing improvement to the functions and processes in the County and cities' shorelines.

Many of the restoration opportunities noted in this plan affect private property. It is not the intent of this plan to require restoration on private property or to commit privately owned land for restoration purposes without the willing and voluntary cooperation and participation of the affected landowner.

1.1. Purpose

The primary purpose of the Shoreline Restoration Plan is to plan for "overall improvements in shoreline ecological function over time, when compared to the status upon adoption of the master program" (WAC 173-26-201(2)(f)). Secondarily, the Shoreline Restoration Plan may enable the County and cities to ensure that the minimum requirement of no net loss in shoreline ecological function is achieved on a county-wide basis, notwithstanding any shortcomings of individual projects or activities.

Activities that will have adverse effects on the ecological functions and values of the shoreline must be mitigated (WAC 173-26-201(2)(e)). Proponents of such activities are individually required to mitigate for impacts to the shoreline areas, or agreed-to off-site

mitigation, which as conditioned, is equal in ecological function to the baseline levels at the time each activity takes place. However, some uses and developments cannot be fully mitigated. This could occur when project impacts may not be mitigated in-kind on an individual project basis, such as a new bulkhead to protect a single-family home that can be offset, but not truly mitigated in-kind unless an equivalent area of bulkhead is removed somewhere else. Another possible loss in function could occur when impacts are sufficiently minor on an individual level, such that mitigation is not required, but are cumulatively significant. Additionally, unregulated activities (such as operation and maintenance of existing legal developments) may also degrade baseline conditions. Finally, the SMP applies only to activities in shoreline jurisdiction, yet activities upland of shoreline jurisdiction or upstream or downstream in the watershed may have offsite impacts on shoreline functions.

Together, these different project impacts may result in cumulative, incremental, and unavoidable degradation of the overall baseline condition unless additional restoration of ecological function is undertaken. Accordingly, the Shoreline Restoration Plan is intended to be a source of ecological improvements implemented voluntarily by the County, cities, and other government agencies, developers, non-profit groups, and property owners within shoreline jurisdiction to ensure no net loss of ecological function, and to result in an improvement of ecological function (Figure 1).

1.2. Restoration Plan Requirements

This Restoration Plan has been prepared to meet the purposes outlined above, as well as specific requirements of the SMP Guidelines (Guidelines). Specifically, WAC Section 173-26-201(2)(f) of the Guidelines says:

(i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration;

(ii) Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;

(iii) Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;

(iv) Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;

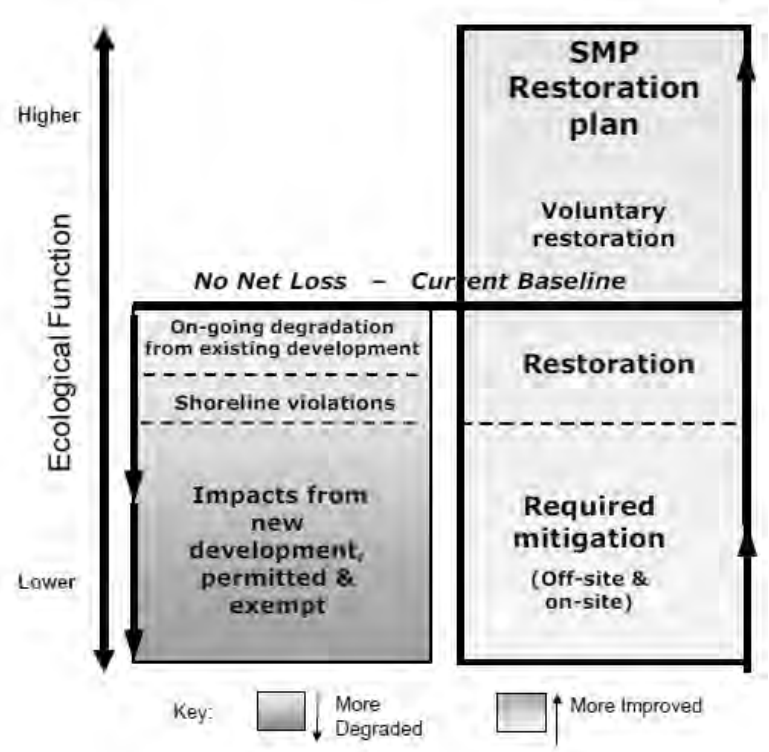


Figure 1. Diagram of the role of restoration relative to achieving the SMP standard of "no net loss" of ecological functions (Ecology 2010)

(v) Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals;

(vi) Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

In addition to meeting the requirements of the Guidelines, this Restoration Plan is intended to identify and prioritize areas for future restoration and mitigation, support applications for grant funding, and to identify the various entities and their roles working within the County and cities to enhance the shoreline environment.

1.3. Types of Restoration Activities

Consistent with Ecology's definition, the use of the word "restore" in this document encompasses a suite of strategies that can be approximately delineated into five categories:

- Creation: Establishment of new shoreline resource functions where none previously existed.

- Re-establishment: Restoration of a previously existing converted resource that no longer exhibits past functions.
- Rehabilitation: Restoration of functions that are significantly degraded.
- Enhancement: Improvement of functions that are somewhat degraded.
- Preservation: Protection of an existing high-functioning resource from potential degradation. Preservation is often achieved through conservation easements or the purchase of land.

Restoration can sometimes be confused with mitigation. Mitigation is defined by WAC 197-11-768 as the sequential process of avoiding, minimizing, rectifying and reducing impacts, as well as compensating for unavoidable impacts and monitoring the impact.

1.4. Restoration Plan Approach

As directed by the SMP Guidelines, the following discussions include: restoration goals and objectives; a summary of baseline shoreline conditions; existing County and local plans and programs that facilitate restoration actions; identification of the County's partners in restoration; and ongoing and potential projects that positively impact the shoreline environment. The Restoration Plan also identifies anticipated funding and implementation of restoration elements.

This Shoreline Restoration Plan is focused on restoration projects that are reasonably likely to occur in the foreseeable future, and restoration opportunities are not limited to those identified in this plan. Potential restoration opportunities were identified based on existing restoration planning document recommendations, including the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a), the Salmon and Steelhead Limiting Factors Reports, the Habitat Work Schedule (hws.ekosystem.us), and other salmon recovery Lead Entity planning documents, as well as input from Cowlitz County, participating cities, and restoration partners. Many of these restoration planning documents include protection of intact functions and processes as an integral component to restoration planning. Therefore, although protection is distinct from restoration at the site level, restoration opportunities presented in this document also include opportunities to protect high functioning areas.

In many cases, recommendations apply broadly to watershed areas (for example, "Protect existing rearing habitat to ensure no further degradation"). In this case, the Integrated Watershed Assessment in the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan, as well as functional analysis in the *Shoreline Analysis Report*

can be used to identify high functioning areas that could benefit from protection (through regulatory or voluntary measures), as well as low to moderately functioning areas that may benefit from restoration actions.

The restoration opportunities identified in this plan are focused primarily on publicly owned open spaces and natural areas. Any restoration on private property would occur only through voluntary means or through re-development proposals.

2. RESTORATION GOALS

This plan establishes a basic framework for restoring the County's shoreline resources over time. The following goals have been identified in the County's existing comprehensive plan and shoreline master program. These may be updated once new document goals are available.

Comprehensive Plan Goals

- Conserve unique wildlife habitats, natural features, and recreation areas of Cowlitz County.
- Retain wherever possible, wetland and shoreland areas in their natural state, for the maintenance and production of wildlife and recreation uses.

Shoreline Master Program Goals

- Maintain a high quality environment along the shorelines of Cowlitz County.
- Preserve and protect those fragile and natural resources, and culturally significant features along the shorelines of Cowlitz County.
- Restore damaged features or ecosystems to a higher quality than may currently exist.
- Preserve unique and non-renewable resources.

3. EXISTING CONDITIONS

The *Shoreline Analysis Report* (TWC and Parametrix 2013) describes existing physical and biological conditions in the shoreline area within County and City limits, including identification of lower and higher functioning areas and recommendations for restoration of ecological functions where they are degraded. Degraded areas in shoreline jurisdiction are summarized below, organized by Shoreline Assessment Unit (as identified in the *Shoreline Analysis Report*).

3.1. Unincorporated Cowlitz County

3.1.1. Columbia River Assessment Unit

Key degraded functions include floodplain disconnection and in-stream habitat diversity. Lower scoring reaches in the Columbia River represent areas of intensive transportation (Port and railroad) infrastructure, with limited shoreline vegetation, levees, overwater structures, and extensive impervious surfaces. Because of the intensive industrial development in these reaches, there may be opportunities for enhancement; however, large scale rehabilitation of functions in these reaches is unlikely. As such, an effective restoration strategy for the Columbia River Assessment Unit should balance enhancement of highly impaired areas with rehabilitation or protection of less impacted areas.

In general, the islands and confluences of major river mouths with the Columbia River provide some of the least altered shoreline habitats in the assessment unit. Both Fisher and Cottonwood Islands are designated as Corps dredge disposal sites. Other high functioning reaches include undeveloped wetland areas south of the Cowlitz River mouth and near the mouths of the Kalama and Lewis Rivers. Protection of these high functioning areas should be a priority.

3.1.2. Lewis River Assessment Unit

The Salmon and Steelhead Limiting Factors report for WRIA 27 (Wade 2000b) identifies the Lewis River dam network as the primary limiting factor for salmonid habitat in this area. The three mainstem dams alter the natural hydroperiod of the lakes and downstream areas, limit longitudinal connectivity in the watershed, create fish passage barriers, and restrict downstream transport of sediment and large woody debris. Planned and ongoing actions by PacifiCorp to mitigate for impacts to fish passage and habitat alterations will be instrumental in maintaining and improving shoreline functions in the Lewis River (see Section 3.1.2).

In addition to dam impacts, floodplain connectivity, instream habitat complexity, and riparian vegetation are also key factors limiting functions in the Lewis River Assessment Unit. Ecological functions in the reaches in the lower Lewis River downstream from the City of Woodland (Shoreline Analysis Reaches 1-5) are significantly degraded. The shorelines in these lower reaches are lined with levees, devoid of native vegetation, and lack habitat complexity. Despite significant degradation of natural shoreline functions of the lower Lewis River, the agricultural fields in the area do likely provide winter foraging habitat for migratory waterfowl. These reaches also experience tidal influence from the Columbia River estuary, and therefore have the potential to provide low

energy rearing habitats for juvenile salmon, although the lack of shoreline complexity significantly limits the realization of such potential.

There are several key reaches that provide significant habitat functions in the Lewis River Assessment Unit. These areas include off-channel habitat surrounding Eagle Island; the Lewis River mainstem reach between Cedar Creek and Merwin Dam; Cedar Creek watershed and the lower reaches of Johnson, Ross, Robinson, and Colvin creeks; wetland complexes in the lower 2 miles of the South Fork Chelatchie Creek; and backwater slough areas above the Lewis River Salmon Hatchery (Wade 2000b). These areas should be prioritized for habitat protection and enhancement, as appropriate.

3.1.3. Kalama River Assessment Unit

Functional scores identified in the *Shoreline Analysis Report* were consistently higher functioning throughout the Kalama River basin compared to other assessment units in the County on account of the forested nature of much of the Kalama watershed.

The lower Kalama River has the most impaired functions in the assessment unit. A study of the lower 10 miles of the Kalama River conducted in Phase II of the LCFRB Watershed Assessment Project (R2 and MBI 2004) found that natural geomorphic processes are severely limited in the lower Kalama River. These processes are impaired by armoring and levees that cover the majority of the shoreline length; much of the armoring is designed to protect Kalama River Road, which parallels the lower Kalama River. As a result of development and channelization of the river the density of large woody debris is poor in the lower River.

Approximately 96 percent of the Kalama River Watershed is managed for forest production; therefore, forestry practices have a significant effect on shoreline functions in the watershed. In smaller tributaries in particular, areas of forest harvest occur on both sides of the stream, and vegetated buffers are smaller compared to the mainstem Kalama. Fish passage barriers also present a significant impairment to shoreline functions in the Kalama River Assessment Unit.

Areas with significant habitat value for salmonids include the following: mainstem Kalama between Lower Kalama Falls (RM 10) to around Modrow Bridge (RM 2.4); upper mainstem Kalama River (RM 10 to RM 35), tributaries below Lower Kalama Falls and any remaining off-channel habitat; Gobar Creek, Wildhorse Creek, North Fork Kalama, Langdon Creek, and Lakeview Peak Creek (Wade 2000b).

3.1.4. Cowlitz River Assessment Unit

As noted in the Lower Cowlitz River and Floodplain Habitat Restoration Siting and Design Report (Tetra Tech 2007), primary limitations on restoration in the Lower Cowlitz are the high sediment load in the upper Toutle River, the regulation of flows, and existing and proposed development within the floodplain and along the riparian zone.

The North Fork Toutle River and upper South Fork Toutle River still maintain an extremely high sediment load resulting from the 1980 eruption of Mount St. Helens, particularly on the North Fork Toutle River upstream of the Corps' Sediment Retention Structure. The high sediment load has resulted in a broadly braided and frequently migrating channel. Because these braided channels each convey a relatively small portion of the total flow and because each channel is wide relative to its depth, the sediment plain can act as a fish barrier, preventing upstream migrations during low flow conditions (AMEC 2010).

The Shoreline Analysis Report identified reaches just north of the City of Kelso (Shoreline Analysis Cowlitz reaches 9-13), as impaired compared to other reaches in the Assessment Unit. The Cowlitz River is artificially constrained by levees in these reaches and shoreline vegetation is limited. Other degraded reaches include highly developed reaches along Silver Lake (Shoreline Analysis Cowlitz Reaches 105, 111, and 112), which have a high density of overwater structures and other shoreline modifications. Several sites along the Cowlitz River were used as dredge disposal locations following the eruption of Mount Saint Helens in 1980. These sites occur in several locations on both sides of the river between the City of Kelso and Castle Rock. Today, these disposal sites remain unvegetated, and former floodplain areas are disconnected as a result of the disposal activities. The 1980 event also impacted tributaries, leaving them disconnected as a result of mud flows. Many of these tributaries are still in the process of recovering, as dredge spoil stockpiles were located directly on their banks. Ongoing erosion of these stockpiles adds to the fine sediment accumulation and poor water quality in the Cowlitz River.

In contrast to the artificially confined reaches in the lower Cowlitz River, shoreline areas near the northern County border occur on a broad floodplain with significant riparian wetland areas. Wetland areas in the vicinity of the Horseshoe Bend area, south of Castle Rock also provide high functioning, riverine wetland habitats (Shoreline Analysis Cowlitz Reaches 15 and 16). Similarly, undeveloped reaches of Silver Lake (Shoreline Analysis Cowlitz Reaches 104, 106-110, 113-116) have high hydrologic, vegetated, and

habitat functions resulting from the large areas of relatively undisturbed forested and shrub wetlands.

3.1.5. Mill, Abernathy, Germany Creek Assessment Unit

Ecological functions in Mill, Abernathy, and Germany Creeks are primarily influenced by forest harvest activities, agriculture, and rural residential development. The Shoreline Analysis Report did not identify any particularly low functioning reaches in this Assessment Unit. However, fish passage barriers in Germany and Coal Creeks block nearly one third of potential instream habitat, and correction of those barriers is a significant restoration opportunity.

3.1.6. South Fork Chehalis River Assessment Unit

Dominant land use in the upper South Fork is commercial forestry, and agricultural uses predominate in the lower river. Both agricultural and forestry uses have resulted in significant alterations to the shorelines of the South Fork Chehalis River. Degraded riparian vegetation, high sediment loads originating from the upper watershed, and a high density of fish passage barriers are the primary impairments in the upper watershed (Chehalis Basin Partnership Habitat Work Group 2008).

3.2. City of Castle Rock

As a result of sediment deposition from the 1980 Mount Saint Helens eruption, the Cowlitz River within the City of Castle Rock includes alluvial gravel bars on the inner bends of the River. Additionally, the tributaries of the Salmon, Whittle, Arkansas, and Janish Creeks were backed up with mud flow from the 1980 eruption, minimizing their effectiveness for fish habitat, wetland, and riparian functions. The continued loading of dredge spoils on stream banks as stockpile areas prolongs their ability to recover. The downtown core of the City of Castle Rock is surrounded by a ring levee, which limits hydrologic functions.

Vegetation is limited to a relatively narrow forested riparian corridor along much of the City's shoreline. "The Rock" community park includes substantial forested vegetation extending up to 500 feet from the river. A dredge disposal site, in Shoreline Reach 19 is sparsely vegetated. Salmon Creek and Arkansas Creek within the City's shoreline jurisdiction have narrow bands of forested riparian vegetation. Although not confined by armoring or a levee, Salmon Creek borders the railway, and is artificially confined to its present course.

3.3. City of Kalama

The shoreline along the Columbia River in the City of Kalama and its UGA is lined with levees or other shoreline armoring and shoreline vegetation is substantially limited. Over- and in-water structures are present throughout the Columbia River reaches, associated with Port properties. Wetlands north of the Kalama River in the City's UGA have important habitat and water quality functions.

Shoreline functions are significantly better on the Kalama River in the City. A narrow wetland situated between Interstate 5 and the railway provides important water quality functions. The majority of the shoreline area on Kress Lake (Reach 29) is well vegetated, with little human disturbance of functions.

3.4. City of Kelso

The entire Cowlitz River shoreline in the City and its UGA are impaired by shoreline armoring and levees. The series of levees has channelized the lower Cowlitz has channelized the lower Cowlitz River, and ongoing levee maintenance results in limited shoreline vegetation. A railway parallels the Cowlitz River, and further limits any shoreline vegetation functions along most of the Cities reaches.

Similarly, a levee isolates the Coweeman River from its northern shoreline for its entire length within the City. Hydrologic connectivity is better on the southern (left) bank of the River and within the eastern UGA where shoreline vegetation and habitat are more diverse. In the eastern UGA, Hart Lake (Shoreline Analysis Cowlitz Reach 44) includes a large wetland area, but much of the vegetation is mowed, which limits vegetative functions. This area represents significant restoration potential.

The shoreline area at the confluence of the Cowlitz and Columbia River includes substantial area of intact wetland habitat, and this area is ecologically significant and relatively high functioning, although functions are impaired by a levee at the northern portion of the reach.

3.5. City of Woodland

Riparian vegetation is limited in the City's core downtown area. The levee that separates Shoreline Analysis Reach 12 from the River acts to channelize the River through the City's core area.

The City's shoreline on Horseshoe Lake is developed with roads, parks, and residential and commercial development. At least eighteen overwater structures are present on Horseshoe Lake, associated with existing residential development.

Shoreline areas north of the City's core (Shoreline Analysis Lewis Reaches 13 and 15) provide the most densely vegetated forested shoreline in the City. These reaches also provide some of the highest hydrologic functions in the City because they provide hydrologically connected floodway areas.

4. EXISTING COUNTY AND CITY PROGRAMS

4.1. Cowlitz County

4.1.1. Comprehensive Plan

The County Comprehensive Plan, adopted by the Board of County Commissioners on November 1, 1976, is a statement of policies and goals that guides growth and development throughout the County. All other development ordinances, including land use, subdivision, and environmental regulations must be consistent with the Comprehensive Plan. The County is currently in the final phases of the process of drafting its Comprehensive Plan Update.

The Final Vision Report (MPC and EA Blumen 2010) of the proposed Comprehensive Plan states, "We value our strengths: our historic rural and small town character and our irreplaceable natural environment – mountains, forests, agricultural and mineral lands; streams, lakes and shorelines; and plentiful clean air and water. Conservation of these features contributes to our economic well-being, sense of place and relationship to nature."

4.1.2. Public Works

National Pollution Discharge Elimination System (NPDES)

On February 16, 2007, Cowlitz County was issued a NPDES phase II Municipal Stormwater Permit. This permit requires the County to develop and implement a program to reduce stormwater runoff and pollution in unincorporated urban areas adjacent to the cities of Longview and Kelso. The Stormwater Management Plan (SWMP) was updated in 2012. Activities associated with the stormwater permit include outreach and education, public involvement, and illicit discharge detection and elimination.

4.2. City of Castle Rock

The City updated its Comprehensive Plan in 2006. Citing the significance of lands both within the City limits and in the surrounding area of influence, the Plan extends beyond the City limits to address the area within a designated Urban Growth Boundary. The

Environment Element of the Comprehensive Plan states, "Natural amenities including the Cowlitz River, forested hillsides, riverfront property, abundant fish and wildlife and many other factors all contribute significantly to the City's atmosphere and success. This chapter attempts to balance protection of critical areas and other natural amenities with the goals and policies found throughout the comprehensive plan." The City of Castle Rock and Castle Rock School District Park and Recreation Plan, which outlines a standard for quality of life and environment enhancements was adopted by reference into the Comprehensive Plan. The city approved the Castle Rock Riverfront Park Master Plan as an appendix to the Park and Recreation plan. This Master plan included many opportunities to turn the negative impacts of the dredge spoils from the eruption of Mount Saint Helens into as asset for both public enjoyment and enhancement of fish and wildlife habitat. Many of the projects in this Master plan have been achieved, including three habitat improvement projects on the Whittle Creek, many bank improvements on the Cowlitz River with managed access (including an environmentally preferred boat launch).

4.3. City of Kalama

The Kalama City Council adopted a revised Kalama Comprehensive Plan on December 7, 2005. The City of Kalama is beginning to develop a growth management area similar to an official Urban Growth Boundary to help guide its growth and development. The Comprehensive Plan includes goals to balance economic growth with environmental protection. These goals include the following:

- Protect areas that are generally not suitable for intensive development such as those prone to landslides, flooding and/or containing wetlands and/or other critical areas.
- Seek to restore natural systems and environmental functions that have been lost or degraded, when feasible.
- Conserve and protect groundwater and maintain good quality surface water.
- Provide for the preservation and restoration of significant natural sites and locations.

4.4. City of Kelso

4.4.1. Comprehensive Plan

The Comprehensive Plan for the City of Kelso was adopted in 1980, with chapter updates in 1987 and 1992. Goals in the Comprehensive Plan are directed toward ensuring economic growth and security, public access, and environmental protection.

4.4.2. Public Works

The City of Kelso implements a Stormwater Management Plan to comply with its Phase II NPDES permit. Activities include education and outreach, illicit discharge detection and elimination, and stormwater management and monitoring programs. The City has also investigated the potential for application of Low Impact Development (LID) techniques within the City.

4.5. City of Woodland

A study completed in 2000 evaluated the City's flood hazard and drainage issues and identified recommended solutions (RW Beck 2000). Study goals included the following:

- Prevent property damage from flooding;
- Maintain good water quality;
- Preserve sensitive resources and maintain varied use; and
- Develop a continuous and comprehensive program for managing surface water.

Recommendations in the plan included both non-structural and structural recommendations. Non-structural recommendations included strengthening regulations, developing public education and outreach measures, and conducting studies and monitoring. Capital improvement projects were generally focused on improving structural stormwater drainage systems.

5. RESTORATION PARTNERS

In addition to the County and cities, state, regional, and local agencies and organizations are actively involved in shoreline restoration, conservation, and protection in and around Cowlitz County. These partners and their local roles in shoreline protection and/or restoration are identified below and generally organized in order by the scope of the organization, from the larger state and watershed scale to the local scale.

5.1. U.S. Army Corps of Engineers

The Corps of Engineers owns and operates the federal dams on the Columbia River and it constructed and maintains the Toutle River Sediment Retention Structure (SRS). As a result of the Federal Columbia River Power System (FCRPS) Biological Opinion, the Corps is obligated to mitigate for its impacts to listed fish species. The Corps is proposing to raise the SRS to limit downstream sedimentation and to conduct maintenance dredging as needed to limit flood risks for cities along the Cowlitz River. The Corps will need to mitigate for impacts to upstream habitats along the Toutle River

and for dredging effects. Specific mitigation measures have not yet been identified. The Corps has also conducted mitigation through habitat restoration projects along the Columbia River to compensate for the effects of dredging to deepen the navigation channel there.

In addition to planning for and funding restoration in the lower Columbia River and its tributaries, the Corps funds ongoing research, monitoring and evaluation studies in the Lower Columbia River as part of its mitigation responsibilities.

The Corps is also engaged in a General Investigation study to recommend approaches to restore ecosystem functions in the lower Columbia River and estuary, including "wetland/riparian habitat restoration, stream and fisheries improvement, water quality, and water-related infrastructure improvements" (Corps 2012). Congress authorized the General Investigation in 2000, and work was first initiated in 2003, and later reinitiated in 2012. Projects being evaluated include floodplain reconnections, channel habitat restoration, and riparian restoration (Corps 2013). Initial projects identified include six areas in the Columbia River Estuary, five areas in tributaries in Washington State, and three areas in tributaries in Oregon (Corps 2013). Projects on the Columbia River include an area bordering Cowlitz and Wahkiakum Counties, and an area between the Cities of Kalama and Woodland. Project areas identified in Columbia River tributaries in Cowlitz County include the entire Cowlitz River up to Mayfield Lake, as well as the lower Toutle River and lower Coweeman River, and a portion of the Lewis River just upstream from the City of Woodland (Corps 2013). An alternatives analysis will be completed to evaluate and select the preferred alternative.

5.2. Northwest Power and Conservation Council Fish & Wildlife Program

The Northwest Power and Conservation Council (NPCC) is a multi-state planning agency responsible for balancing the ecological impacts of energy production in the northwest. Current hydropower programs and operations are engaged in activities to minimize the ongoing impacts of flow regulation on the ecological processes of the Columbia River and its tributaries. These actions are generally the result of obligations under the Endangered Species Act (Section 7 consultations, Section 10 Habitat Conservation Plans (HCPs)) or Federal Energy Regulatory Commission (FERC) relicensing, and therefore, these actions are technically mitigation for ongoing impacts rather than voluntary restoration.

The Council guides Bonneville Power Administration's (BPA's) funding of projects to implement the fish and wildlife program. Projects that are conducted using these funds,

no matter how indirectly related to hydropower impacts, are also a part of mitigation for ongoing dam impacts. Nevertheless, it is expected that despite the funding source, such projects will improve ecosystem functions above the existing functional baseline, and as such, these projects would be considered as restoration within the framework of the County's SMP.

In 2009, the NPCC updated its Columbia River Basin Fish and Wildlife Program. The program identifies impacts to fish and wildlife resulting from hydropower operations in the Columbia Basin, and it identifies strategies to study, monitor, and mitigate those impacts. The project funding agenda identified for the program includes the following:

1. Anadromous Fish, Resident Fish, and Wildlife

    - Bonneville will fulfill its commitment to "meet all of its fish and wildlife obligations." Funding levels should take into account the level of impact caused by the federally operated hydropower system and focus efforts in areas most affected by operations.

2. Land and Water Acquisition Funds

    - Water transaction program: Bonneville established a water transactions program in response to the 2000 Columbia River Basin Fish and Wildlife Program and the 2000 FCRPS Biological Opinion. Bonneville shall fund the continuation of the water transaction program to pursue water right acquisitions in subbasins where water quantity has been identified in a subbasin plan as a primary limiting factor. The water transaction program will continue to use both temporary and permanent transactions for instream flow restoration.

    - Land acquisition fund: Bonneville shall fund a basinwide land acquisition program, which will include, but not be limited to, riparian easements and fee-simple acquisitions of land that protects watershed functions.

5.3. Lower Columbia Fish Recovery Board

The Lower Columbia Fish Recovery Board (LCFRB) is the Lead Entity for salmon restoration in watersheds throughout most of Cowlitz County and watersheds to the east, extending to the Little White Salmon River, and to the west to the mouth of the Columbia River.

In 2010, the LCFRB, in coordination with regional partners, produced the Washington Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan. The Plan provides an integrated approach to addressing salmon recovery, watershed planning,

and Northwest Power and Planning Fish and Wildlife Subbasin Plans. The Plan used a two-pronged approach to evaluate existing conditions and restoration potential. First, an Integrated Watershed Assessment (IWA) approach was applied at the sub-basin scale to assess the need for restoration or protection and the relative priority of the action in the watershed. In addition, the Plan identified habitat factors affecting salmonid production, and developed stream priority rankings based on prioritized salmon populations and habitat factors using an Ecosystem Diagnosis and Treatment (EDT) approach. The EDT approach assesses habitat factors to rank priority areas for achieving population targets for salmon recovery. Population targets were based on scientific, biological, social, cultural, political and economic factors. Based on the results of the EDT analysis, stream reaches were identified by their treatment priority, where Tier 1 represents the highest priority, and Tier 4 represents the lowest priority for salmon recovery. Recovery plan reach priorities are mapped in Appendix A. Reach locations differ between the Shoreline reaches and the Salmon Recovery reaches because the Shoreline Analysis Report identified reaches based on land use considerations as well as stream characteristics, whereas Salmon Recovery stream reach break locations were located at every tributary confluence. Detailed information on the results of the IWA and EDT analyses can be found in Appendix E of the Lower Columbia Recovery Plan (LCFRB 2010).

5.4. PacifiCorp

As a part of its Federal Energy Regulatory Commission relicensing process, PacifiCorp engages in fish passage projects, fish population supplementation programs, habitat enhancement, monitoring, and funding of restoration projects in the Lewis River Basin.

In 2012, PacifiCorp completed installation of new facilities to transfer anadromous fish upstream from the base of Merwin Dam to above Swift #2, opening 117 miles of spawning habitat. The new facilities will also transfer juvenile salmonids downstream past the dams.

In 2008, PacifiCorp developed a Shoreline Management Plan in 2008 for the three major reservoirs in the upper Lewis River. The PacifiCorp Shoreline Management Plan applies to lands extending from the Ordinary High Water Mark (OHWM) to the elevation 10 feet above the OHWM. PacifiCorp owns many of the lands within the Shoreline Management Plan boundary area, and it holds flowage easements on the other lands. The PacifiCorp Shoreline Management Plan was not developed to meet the regulatory requirements of the Shoreline Management Act, but it has many parallels that are consistent with the Shoreline Management Act standards.

5.5. Cowlitz Public Utility District

The Cowlitz Public Utility District (PUD) owns the Swift #2 dam on the Lewis River. As part of its 2008 relicensing agreement, Cowlitz PUD agreed to conduct the following activities, either individually or in coordination with PacifiCorp, which manages the dam operations:

- reintroduce anadromous salmon above Swift Reservoir (complete-see description above)
- fund three salmon hatcheries (ongoing)
- fund aquatic habitat improvement projects (ongoing)
- ensure minimum flows to the North Fork Lewis River between Swift No. 1 and Swift No. 2 dams (ongoing)
- monitor water quality (ongoing)
- manage 525 acres of wildlife habitat (ongoing)

5.6. Lower Columbia Fish Enhancement Group

The Lower Columbia Fish Enhancement Group (LCFHG) is active throughout Cowlitz County as part of its mission to create and implement restoration and salmon recovery strategies through community partnerships. The organization promotes private stewardship and volunteerism through education and outreach, and concentrates funds on salmon recovery, assessment, and habitat restoration, often in partnership with other entities.

General elements of LCFEG's strategic plan are development of relationships with key shareholders; building financial and volunteer support through education and outreach programs; assisting the Lower Columbia Salmon Recovery Board, WDFW, and NOAA Fisheries in identifying, prioritizing, and implementing salmon restoration projects; increase program funding and hire and train staff; and expand the board to include a range of active members from a wide variety of backgrounds.

LCFEG sponsored efforts to identify limiting factors for salmon populations and restoration opportunities in the Lower Cowlitz River (Power and Tyler 2009) and the Kalama River basin (Tetra Tech 2007). The resulting documents provided lists of prioritized restoration opportunities (see Tables 5-4 and 5-5).

LCFEG is the primary sponsor of nutrient enhancement efforts that include the Kalama, Cowlitz, and Lewis watershed. This ongoing collaborative effort utilizes several funding sources (Pacific Salmon Commission, BPA, and/or PacifiCorp) and a wide range of volunteers groups to implement the collection and disperse of salmon carcasses. The

LCFEG recently completed an off-channel habitat enhancement projects on the Lower Kalama River and the North Fork Lewis River. Additional habitat enhancement projects are planned for the near future (see Tables 5-4 and 5-5).

5.7. Lower Columbia Estuary Partnership

The Lower Columbia Estuary Partnership (LCEP) administers a Habitat Restoration Program to protect and restore habitat functions and support salmon recovery in the lower Columbia River estuary, between Bonneville Dam and the mouth of the river. The organization's overall strategy is to take a widespread teaming approach to implement scientifically sounds projects, as well as fund partners' projects. LCEP takes a regional approach to habitat restoration, participates in the efforts of other restoration entities, including watershed councils, land trusts, and non-profits.

LCEP produced the Management Plan for the Lower Columbia River; actions recommended in the plan are listed in Section 6.1.1 Key habitat work led by the organization includes creating fish habitat with large woody debris, restoring riparian vegetation, and removing fish barriers. LCEP also conducts ecosystem condition monitoring, tracking toxins and habitat, as well as monitoring the success of restoration projects. They've produced several map sets using monitoring data, and make the spatial information available to the public, along with reports and publications. Volunteers are utilized for restoration and monitoring work. Finally, LCEP conducts education programs in school classrooms and through field trips.

Current LCEP projects in shoreline area are reference site monitoring at the mouth of the Lewis River, Dredge Spoil Island habitat monitoring, and Martin Island habitat monitoring.

5.8. Intensively Monitored Watershed Program Partners

The Intensively Monitored Watershed (IMW) project is a joint effort of the Washington Departments of Fish and Wildlife, Ecology, NOAA Fisheries, the Environmental Protection Agency, Lower Elwha Klallam Tribe and Weyerhaeuser Company. Funding for the IMW program is provided by the Washington Salmon Recovery Funding Board. The Mill, Abernathy, Germany watershed is one of three IMWs in the state. The IMW cooperators collected water quantity, water quality, habitat, summer juvenile fish abundance, and smolt production data and are identifying specific restoration actions for each IMW treatment watershed. An updated plan for monitoring fish and habitat responses to restoration was proposed for Lower Columbia watersheds in 2012 (Zimmerman et al. 2012).

5.9. Columbia Land Trust

The Land Trust, a non-profit in place since 1990, works throughout the Columbia River Region. The organization works collaboratively with private landowners, local governments, and other non-profits to develop stewardship plans that restore degraded habitat and protect natural resources. Private landowners who work with the Trust are generally conservationists, ranchers, farmers, foresters, and orchardists. Land acquisition and forest planning are major parts of the Trust's effort; more local efforts include a backyard habitat certification program, outreach events, and volunteer work crew events.

Land Trust work within Cowlitz County shoreline jurisdiction includes a recent two-phase acquisition and restoration on Germany Creek. More than 185 acres floodplain, riparian, and upland habitat have been removed from the threat of development and placed in permanent protection. Additional onsite improvements, including log placement, off-channel habitat enhancement, and invasive weed removal, will help restore rearing, spawning, and migrating habitat for salmonids.

5.10. Cowlitz Indian Tribe

The Tribe focuses protection and restoration actions on culturally relevant species and landscapes. Key in their mission is to work to educate and inspire the community to promote their mission of conservation. The Tribe specifically recognizes elk, deer, mountain goat, salmon, eulachon, sturgeon and lamprey as important species to the Cowlitz people. Landscapes of significance that may occur within shoreline jurisdiction include estuaries; freshwater lakes and wetlands; the Cowlitz, Lewis, and Kalama Rivers and their tributaries; deciduous and coniferous forest; sub-alpine meadows; and mountains.

The Tribe is presently engaged in several restoration projects in Cowlitz County, including two active projects on Abernathy Creek and two active side channel restoration projects at Eagle Island on the North Fork Lewis River. An additional project is presently proposed on Abernathy Creek. Projects on Abernathy Creek consist of abandoned roadbed removal to restore floodplain and channel migration zone connectivity and restoration of two acres of riparian wetlands and a side channel to created wintering habitat and high-flow refugia for steelhead and coho. The proposed project on Abernathy Creek would install large wood for instream habitat enhancement. Projects are described further in Section 6.

5.11. Cowlitz Conservation District

The Conservation District works through two primary avenues. First, the District works with communities to implement projects on a watershed scale. Projects focus on salmon recovery, water quality, and invasive weed removal. A basin-wide effort to implement all three types of projects is presently in place in the Mill-Abernathy-Germany area. Secondly, the District provides technical and financial assistance to individual landowners throughout the County to promote sound management of natural resources, advising on restoration, salmon needs, and forestry issues. The District works directly with landowners and provides information through watershed plans, timber plans, and farm plans.

The District has been a partner in the Cowlitz/Wahkiakum watershed planning effort, which defined strategies to best collect and compile data in order to identify limiting factors. This ongoing approach has identified fish barrier improvements, riparian restoration projects, in-stream habitat enhancement, livestock exclusion, and other potential restoration projects to address limiting factors, particularly in the Kalama and Lewis Rivers and Mill Creek. Currently funded projects by the District include the installation of woody debris in several reaches of Abernathy Creek to restore habitat and reduce flow and erosion.

5.12. Other Volunteer Organizations

Many recreational groups and private organizations are active in Cowlitz County. While some of these groups may not have historically worked in the shoreline jurisdiction of Cowlitz County, this does not preclude involvement in voluntary restoration activities in the future. Probably the most important volunteer is the landowner that acts as a steward of the land following the completion of the project. Potentially active groups include:

- Columbia River Keeper
- Lower Columbia Basin Audubon Society
- Trout Unlimited
- Ducks Unlimited

6. POTENTIAL PROJECTS

The Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a) identified several actions applicable to shoreline areas throughout Cowlitz County.

Some of these actions apply to programs or regulations, while others relate to projects that could be implemented at many sites throughout the watershed (Table 6-1).

Table 6-1 Restoration opportunities applicable to all Assessment Units.

	Action	Status	Entity
Land Use Planning/Regulations	Expand standards in local government comprehensive plans to afford adequate protections of ecologically important areas (i.e. stream channels, riparian zones, floodplains, CMZs, wetlands, unstable geology)	Expansion of existing program	County, Cities
	Manage future growth and development patterns to ensure the protection of watershed processes. This includes limiting the conversion of agriculture and timber lands to developed uses through zoning regulations and tax incentives (consistent with urban growth boundaries)	Expansion of existing program	County, Cities
	Prevent floodplain impacts from new development through land use controls and Best Management Practices	New program	County, Cities, Ecology
	Fully implement and enforce the Forest Practices Rules (FPRs) on private timber lands in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats	Activity is currently in place	WDNR
	Conduct forest practices on state lands in accordance with the Habitat Conservation Plan in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats	Activity is currently in place	WDNR
	Review and adjust operations to ensure compliance with the Endangered Species Act; examples include roads, parks, and weed management	Expansion of existing program	County, Cities
Funding/ Technical Assistance	Increase funding available to purchase easements or property in sensitive areas in order to protect watershed function where existing programs are inadequate	Expansion of existing program	LCFRB, NGOs, WDFW, USFWS, BPA (NPCC)
	Increase technical assistance to landowners and increase landowner participation in conservation programs that protect and restore habitat and habitat-forming processes. Includes increasing the incentives (financial or otherwise) and increasing program marketing and outreach	Expansion of existing program	NRCS, C/WCD, WDNR, WDFW, LCFEG, County, Cities
	Increase technical support and funding to small forest landowners faced with implementation of Forest and Fish requirements for fixing roads and barriers to ensure full and timely compliance with regulations	Expansion of existing program	WDNR
Protection/Restoration Projects	Create and/or restore lost side-channel/off-channel habitat for chum spawning and coho overwintering	New program	LCFRB, BPA (NPCC), NGOs, WDFW, NRCS, C/WCD
	Implement the prescriptions of the WRIA Watershed Planning Units regarding instream flows	Activity is currently in place	Ecology, WDFW, WRIAs, County, Cities
	Increase the level of implementation of voluntary habitat enhancement projects in high priority reaches and subwatersheds. This includes building partnerships, providing incentives to landowners, and increasing funding	Expansion of existing program	LCFRB, BPA (NPCC), NGOs, WDFW, NRCS, C/WCD, LCFEG

	Action	Status	Entity
	Protect and restore native plant communities from the effects of invasive species	Expansion of existing program	Weed Control Boards (local and state); NRCS, C/WCD, LCFEG
	Assess the impact of fish passage barriers throughout the basin and restore access to potentially productive habitats	Expansion of existing program	WDFW, WDNR, County, Cities, WSDOT, LCFEG

Potential and existing restoration projects and actions within each assessment unit are presented in the following sections and summarized in tables. Each project/action has an identification (ID) code; codes comprise a unique number (not intended to imply priority) and a locator tag that identifies the assessment unit within which the project or action is located. Project/action "type" codes are listed for each item. When an entry includes more than one type of project or action, all are listed within the type code.

Project/action types and codes are as follows:

- Habitat-related restoration action (Code H): The project or action is intended to improve habitat in jurisdictional shorelines.
    - Subcode f = floodplain/off-channel work such as side/off-channel creation or enhancement, meandering, adding spawning gravels, and oxbow reconnection
    - Subcode w = wetland creation, restoration, or enhancement
    - Subcode i = instream work such as LWD placement, dredging, and bank armor removal
    - Subcode r = riparian work, including planting, removing invasive vegetation, and gravel bar creation
- Water quality related actions (Code W): Improving water quality is a primary goal of these actions. They may include a habitat component (for example, when riparian restoration is intended to impact water temperatures) or may be aimed solely at water quality, such as completion of a TMDL or restriction of contaminant use.
- Management actions (Code M): This category describes actions that usually require a greater degree of decision-making and research to implement than most habitat actions. It includes management or manipulation of fish or

predator populations, nutrient enhancement, and fish population monitoring. This code also includes most habitat, hydrologic, and water quality monitoring, except where monitoring is implemented as part of a particular habitat restoration project.

- Hydrologic actions (Code Y): This category addresses hydrologic processes and functions that affect the shoreline, and specifically fish habitat. It includes actions that impact flow levels where they affect or impede fish passage or where they affect habitat.

- Fish passage (Code P): Projects related to fish passage include culvert replacement, tributary access, and improvements to dams and other water control devices,

- Habitat acquisition and/or protection (Code A): This code applies where the acquisition of land for the primary purpose of habitat protection, or the use of easements or protective covenants for the same purpose. It includes non-regulatory land use policy changes that apply to specific areas, such as cattle exclusion.

- Research and investigation (Code R): Both formal research projects and less formal gathering of information and literature review are considered in this category.

- Regulatory actions (Code G): Actions in this category include regulatory enforcement and proposed or recommended changes to existing regulations.

- Outreach (Code O): Conducting educational outreach to the public and other entities, identifying potential partners in conservation efforts, pursuing collaborative relationships with other entities, and disseminating information are considered outreach.

6.1. Unincorporated Cowlitz County

6.1.1. Columbia River Assessment Unit

Habitat restoration priorities identified in the Habitat Strategy (LCFRB 2010b) for the lower Columbia River and Estuary that are applicable to potential actions within Cowlitz County shorelines include:

1. Restoring subbasin valley floodplain function and stream habitat diversity

2. Managing forests to protect and restore watershed processes
3. Addressing immediate risks with short-term habitat fixes

The Lower Columbia Estuary Partnership (LCEP) has recently updated its Management Plan for the Lower Columbia River, which includes several programmatic and project recommendations (LCEP 2011).

Key actions identified by LCEP to address restoration, land use, and water quality improvement include the following:

- Identify and prioritize habitat types and attributes that should be protected or conserved.
- Protect, conserve, and enhance priority habitats, particularly wetlands, on the mainstem of the lower Columbia River and in the estuary.
- Monitor status and trends of ecosystem conditions.
- Establish and maintain Columbia River flows to meet ecological needs of the lower Columbia River and estuary.
- Avoid the introduction of non-native invasive species.
- Manage human-caused changes in the river morphology and sediment distribution within the Columbia River channel to protect native and desired species.
- Develop floodplain management and shoreland protection programs.
- Reduce and improve the water quality of stormwater runoff and other non-point source pollution.
- Ensure that development is ecologically sensitive and reduces carbon emissions.
- Expand and sustain regional monitoring of toxic and conventional pollutants.
- Reduce conventional pollutants.
- Clean up, reduce or eliminate toxic contaminants, particularly contaminants of regional concern.
- Provide information about the lower Columbia River and estuary that focuses on water quality, endangered species, habitat loss and restoration, biological diversity, and climate change to a range of users.
- Create and implement education and volunteer opportunities for citizens of all ages to engage in activities that promote stewardship of the lower Columbia River and estuary.

Action objectives from the LCFRB (2010a) are identified in Table 6-2 below.

Table 6-2. Restoration opportunities in the Lower Columbia River and Estuary (Assessment Unit LC).

ID	Type*	Restoration Opportunity	Limiting Factor Addressed	Source Plan
01 LC	Hwi	Protect existing rearing habitat to ensure no further degradation.	Availability of preferred habitat	LCFRB 2010a
02 LC	Hf	Increase shallow water peripheral and side channel habitats toward historic levels.	Availability of preferred habitat; Loss of habitat connectivity	LCFRB 2010a
03 LC	Hfi	Restore connectivity between river and floodplain, tidally influenced reaches of tributaries, as well as in-river habitats.	Loss of habitat connectivity; Microdetritus-based food web; Availability of preferred habitat	LCFRB 2010a
04 LC	M	Reduce predation mortality on emigrating juveniles.	Predation mortality	LCFRB 2010a
05 LC	W	Reduce contaminant exposure of emigrating juveniles.	Contaminant exposure	LCFRB 2010a
06 LC	RM	Document the interaction between emigrating juvenile salmonids and introduced species; minimize negative interactions.	Interaction with introduced species	LCFRB 2010a
07 LC	R	Develop an understanding of emigrating juvenile salmonid life history diversity and habitat use in the lower mainstem, estuary, and plume.	Availability of preferred habitat; Loss of habitat connectivity; Density dependence	LCFRB 2010a
08 LC	YW	Maintain favorable water flow and temperature throughout migration period.	Fitness and timing of juvenile salmonids entering the subbasin	LCFRB 2010a
09 LC	M	Reduce predation mortality on migrating adults.	Predation losses (Adults)	LCFRB 2010a
10 LC	AG	Protect existing spawning habitat to ensure no further net degradation.	Availability of spawning habitat	LCFRB 2010a
11 LC	YW	Maintain favorable water flow and temperature throughout mainstem spawning and incubation period.	Decreased flows during spawning and incubation; Dewatering of redds	LCFRB 2010a

*TYPE = project type: H=habitat (f=floodplain, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P=fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

In addition to shoreline restoration opportunities focused primarily on aquatic ecosystem restoration, restoration of shoreline habitats for terrestrial species should also be pursued. The U.S. Fish and Wildlife Service is proposing to list the streaked horned lark (*Eremophila alpestris strigata*) as threatened, and to designate 12,159 acres of critical habitat in Washington and Oregon. Proposed critical habitat units include several mid-channel islands in the Columbia River, including three islands in Wahkiakum County, as well as one island immediately across from the City of Kalama on the Oregon side of the Columbia River. There are no breeding records of the species in Cowlitz County.

Monitoring in Washington State indicates steep declines in abundance of the species in recent years.

Streaked horned larks inhabit flat, sparsely vegetated areas, including prairie, grasslands, wetlands, mudflats, and open spaces of anthropomorphic origin such as airports, dredge spoils islands, and agricultural fields. Vegetation is typically low and primarily herbaceous. Breeding and wintering habitat are similar. On the Columbia River, the species inhabits sandy islands.

Effective conservation measures for recovery have been identified through research and monitoring and include creating bare or sparsely vegetated areas within or adjacent to suitable, if not occupied, habitat; creation of suitable habitat and protected nest sites in areas protected from human disturbance, predators, and flood events; creation of seasonal mudflats; and the planned timing and placement of dredge materials to create nesting habitat. Elements of proposed or potential restoration projects described in this restoration plan may benefit streaked horned lark; conversely, some salmon-focused restoration actions could negatively impact the species if not planned appropriately to avoid impact.

6.1.2. Lewis River Assessment Unit

As noted in Section 2.1.2, management of dam impacts are among the most significant potential restoration opportunities in the Lewis River Assessment Unit. In addition to addressing dam management, other key strategies for restoring the Lewis River subbasin include restoring floodplain connections and instream habitat complexity and improving riparian habitat. In the upper basin, protection of higher functioning areas is a priority, and restoration should address agricultural and forestry impacts to stream corridors (LCFRB 2010a).

A summary of priority restoration opportunities is provided in Table 6-3.

Table 6-3. Restoration opportunities in the North Fork Lewis River (Assessment Unit NL).

ID	Type*	Action	Status	Entity	Source Plan/ ID
12 NL	YG	Manage regulated stream flows to provide for critical components of the natural flow regime	Expansion of existing program or activity	PacifiCorp, Cowlitz County PUD, FERC, WDFW, NMFS, USFWS	LCFRB 2010a/ L-Lew 1
13 NL	HfO	Conduct floodplain restoration where feasible along the mainstem and in major tributaries that have experienced channel confinement.	New	NRCS, C/WCD, CCD, NGOs, WDFW, LCFRB,	LCFRB 2010a/ L-Lew 4

ID	Type*	Action	Status	Entity	Source Plan/ ID
		Build partnerships with landowners and agencies and provide financial incentives		USACE, LCFEG	
14 NL	QG	Address water quality issues through the development and implementation of water quality clean-up plans (TMDLs)	Expansion of existing program or activity	Ecology, Cowlitz County	LCFRB 2010a/ L-Lew 17
15 NL	AG	Limit intensive recreational use of the mainstem Lewis during critical periods	Expansion of existing program or activity	Cowlitz County, WDFW	LCFRB 2010a/ L-Lew 18
16 NL	Hirf	Instream large woody debris, riparian, and side-channel enhancement in the Eagle Island area.	Designs Complete	LCFEG, Cowlitz Tribe	Interfluve et al. 2009
17 NL	Hf	Off Channel habitat enhancement at RM 13	Design Complete	LCFRB	Unknown
18 NL	P	Anadromous fish passage at Merwin and Swift dams.	Facilities complete, Beginning Operations	PacifiCorp	PacifiCorp and PUD #1 2004
19 NL	Hi	Continue to install large woody debris below Merwin Dam.	Ongoing	PacifiCorp	PacifiCorp and PUD #1 2004
20 NL	MHi	Monitor and maintain gravel conditions below Merwin Dam for spawning habitat.	Ongoing	PacifiCorp	PacifiCorp and PUD #1 2004
21 NL	M	Monitor predator relationships in Lake Merwin and manage as necessary.	Ongoing	PacifiCorp	PacifiCorp and PUD #1 2004
22 NL	MG	Continue to manage wildlife habitat and forest resources per the integrated Wildlife Habitat Management Plans	Ongoing	PacifiCorp, Cowlitz PUD	PacifiCorp and PUD #1 2004
23 NL	M	WRIA 27/28 Nutrient Enhancement. Disperse surplus hatchery salmon carcasses in high-priority mainstem and tributary habitat.	Ongoing	LCFEG	PRISM

*TYPE = project type: H=habitat (f=floodplain, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.1.3. Kalama River Assessment Unit

The following actions were proposed to restore and enhance shoreline functions in the Kalama River (Table 6-4). This table includes specific actions prioritized for salmon recovery identified in a 2009 study to restore habitat conditions in the most developed

lower 2.5 miles of the Kalama River (Powers and Tyler 2009). In the upper watershed, recommended actions are primarily related to forest management to protect high functioning habitats.

Table 6-4. Restoration opportunities in the Kalama River (Assessment Unit KR).

ID	Type*	Action	Status	Entity	Source Plan/ ID
24 KR	G	Fully implement and enforce the Forest Practices Rules (FPRs) on private timber lands in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats	Currently in place	WDNR	LCFRB 2010a/ KAL 1
25 KR	GHfO	Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives	New	NRCS, C/W CD, NGOs, WDFW, LCFRB, USACE, Port of Kalama	LCFRB 2010a/ Kal 5
26 KR	W	Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment	Expansion of existing program	Cowlitz County, C/W CD	LCFRB 2010a/ Kal 15
27/ 32 KR	YWP	Address potential low-flow and thermal passage problems on the bar at the mouth of the Kalama	New	Port of Kalama, LCFEG	Wade 2000b, Powers and Tyler 2009
28 KR	RP	Assess and look for solutions to gravel and debris buildup near the mouths of tributaries in the upper river	New	Cowlitz County	Wade 2000b
29 KR	Hfw	Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River	New	Cowlitz County/City of Kalama	Wade 2000b
30 KR	Hf	Ledgett Groundwater Channel, Left bank at RM 2.5. Create 10,400 square meters of year round rearing habitat with a potential for some spawning habitat.	New	TBD	Powers and Tyler 2009
31 KR	Hir	Pipeline Removal and LWD, Left bank at RM 2.2	New	TBD	Powers and Tyler 2009
33 KR	Hi	Lower Kalama Reach 1A Tidal Design: Install large wood structures to increase salmonid rearing and holding cover at the mouth of the Kalama River.	Design	LCFEG	PRISM
34 KR	Hf	Port Tidal and Backwater Channels, Left bank at RM 0.1	New	Port of Kalama	Powers and Tyler 2009
35 KR	Hfri	Lower Kalama Habitat Enhancement. Install approximately 12 wood structures to improve and expand pool and riffle habitat; restore 5 acres of riparian	Proposed	LCFEG	PRISM

ID	Type*	Action	Status	Entity	Source Plan/ ID
		habitat; enhance 500 feet of existing side channel with woody debris.			
36 KR	Hfi	Spencer Creek Riparian and LWD at RM 0.5. Restore riparian, spawning, and rearing habitat. The mouth of Spencer Creek is at Kalama RM 1.8	New	TBD	Powers and Tyler 2009
37 KR	P	Fish Passage Culvert, Spencer Creek at RM 1.8	New	TBD	Powers and Tyler 2009
38 KR	RHi	Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris)	New	TBD	T. Rymer, NMFS, personal comm.
The following projects are identified in the unincorporated UGA of the City of Kalama					
39 KR	Hf	Port of Kalama Groundwater Channel, Right bank at RM 2.2. Create off-channel rearing habitat.	New	Port of Kalama	Powers and Tyler 2009
40 KR	Hfi	GW Channel System (private), Excavate existing side channel to groundwater source and connect to mainstem, Right bank at RM 2.1	New	TBD	Powers and Tyler 2009
41 KR	Hif	Riprap Removal/Floodplain Reconnection, Right bank at RM 2.4	New	TBD	Powers and Tyler 2009
42 KR	Hf	Evaluate potential to enhance existing active side channel, Right bank at RM 1.8	New	TBD	Powers and Tyler 2009
43 KR	HfwY	Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5.	New	TBD	T. Rymer, NMFS, personal comm.
44 KR	M	WRIA 27/28 Nutrient Enhancement. Dispersal of surplus hatchery salmon carcasses in high-priority mainstem and tributary habitat.	Ongoing	LCFEG	PRISM

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.1.4. Cowlitz River Assessment Unit

Prioritized restoration measures for the Lower Cowlitz basin are identified below as excerpted from the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a):

1. Protect stream corridor structure and function in high priority reaches at risk of degradation;

2. Protect hillslope processes in functional subbasins contributing to Tier 1 reaches;
3. Restore degraded hillslope processes in the Lower Cowlitz subbasin;
4. Create/Restore off-channel and side channel habitat in the mainstem Cowlitz and lower reaches of major tributaries;
5. Restore floodplain function and channel migration processes;
6. Restore access to habitat blocked by artificial barriers (priority locations at Mill Creek, Leckler Creek, Salmon Creek, Foster Creek, Skook Creek, and Blue Creek);
7. Provide for adequate instream flows during critical periods in tributaries;
8. Restore degraded hillslope processes on forest, agricultural and developed lands;
9. Restore riparian conditions throughout the basin (Priority locations in Tier 1 reaches);
10. Restore degraded water quality with an emphasis on temperature; and
11. Restore channel structure and stability.

The same set of general priorities apply to the Coweeman and Toutle Rivers, except that in the Coweeman River, restoring channel structure and stability is a higher priority than in the lower Coweeman. In the Toutle River, an additional high priority action is to address fish passage and sediment issues at the Sediment Retention Structure on the NF Toutle (LCFRB 2010a).

A summary of restoration opportunities throughout the assessment unit is presented in Table 6-5 below.

Table 6-5. Restoration opportunities in the Cowlitz River Assessment Unit (Assessment Unit CR).

ID	Type*	Action	Status	Entity	Source Plan/ ID
45 CR	YG	Manage regulated stream flows to provide for critical components of the natural flow regime	Expansion of existing program or activity	Tacoma Power, Lewis County PUD, FERC, WDFW	LCFRB 2010a/ L Cow 1, Wade 2000a
46 CR	R	Monitor and notify FERC of significant license violations, enforce terms and conditions of section 7 consultations on FERC relicensing agreements, and encourage implementation of section 7 conservation recommendations	Expansion of existing program or activity	NMFS, USFWS	LCFRB 2010a/ L Cow 4

ID	Type*	Action	Status	Entity	Source Plan/ ID
47 CR	HfRO	Conduct floodplain restoration where feasible along the mainstem and in major tributaries that have experienced channel confinement, and especially in areas affected by dredging and floodplain filling following the 1980 Mt. St. Helens eruption. Survey landowners, build partnerships, and provide financial incentives	New	NRCS, Cowlitz CD, NGOs, WDFW, LCFRB, USACE, LCFEG	LCFRB 2010a/ L Cow 6; Toutle 2; Coweeman 6, Wade 2000a
48 CR	G	Expand local government Comprehensive Planning to ensure consistent protections are in place to initiate review of development and real estate transactions that may affect natural resources	Expansion of existing program or activity	Cowlitz County, Kelso, Longview, Castle Rock	LCFRB 2010a/ L Cow 15
49 CR	W	Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment.	Expansion of existing program or activity	Cowlitz County, Cowlitz CD	LCFRB 2010a/ L Cow 19; Toutle 18
50 CR	PW	Address fish passage and sediment issues at the Sediment Retention Structure on the NF Toutle.	Expansion of existing program or activity	WDFW, USACE, LCFEG	LCFRB 2010a/ Toutle 1, Wade 2000a
51 CR	YP	Assess and, if possible, alter the Silver Lake Dam to increase flows in Outlet Creek to assure fish passage into the Silver Lake watershed.	New	TBD	Wade 2000a
52 CR	G	Continue to manage federal forest lands according to the Northwest Forest Plan.	Activity is in place	USFS	LCFRB 2010a/ Toutle 4
53 CR	W	Address temperature impairments through development of water quality clean-up plans (TMDLs)	Expansion of existing program or activity	Ecology	LCFRB 2010a/ Coweeman 15
54 CR	W	Assess, repair, and where possible, decommission roads that are contributing chronic sediment to stream systems or that may fail and lead to landslides, especially within areas with road densities above 3.0 miles/square mile.	Expansion of existing program or activity	USFS, Cowlitz County	Wade 2000a

ID	Type*	Action	Status	Entity	Source Plan/ ID
55 CR	RHi	Look for opportunities, both short- and long-term, to increase Large Woody Debris (LWD) supplies within stream systems.	Projects underway on Toutle and Coweeman	Cowlitz County, LCFEG	Wade 2000a
56 CR	Hr	Replant degraded riparian areas with native conifers. To begin with, focus riparian restoration efforts along the more productive tributaries including Baird, Mulholland, and Goble creeks.	Expansion of existing program or activity	Cowlitz County and partners	Wade 2000a
57 CR	PR	Address fish passage barriers in the Toutle River and tributaries to the lower Cowlitz River and prioritize for repair and replacement.	Expansion of existing program or activity	USFS, Cowlitz County, and partners	Wade 2000a
58 CR	Hrwi	Cowlitz RM 0.5 right bank remove some dredged materials and create riparian and wetland bench	Conceptual plan	TBD	Tetra Tech 2007
59 CR	Hrwif	Cowlitz RM 7.3 right bank remove some dredged materials and create riparian/floodplain bench; construct setback levee if necessary.	Conceptual plan	TBD	Tetra Tech 2007
60 CR	Hrif	Cowlitz RM 8.5 right bank set back levee and plant riparian/floodplain vegetation on bench	Conceptual plan	TBD	Tetra Tech 2007
61 CR	Hrif	Cowlitz RM 9.0 left bank dredged materials removal to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
62 CR	Hr	Place LWD and vegetate with willows (mouth of Ostrander Creek)	Conceptual plan	TBD	Tetra Tech 2007
63 CR	Hr	Remove noxious weeds and restore riparian zone along length of Ostrander Creek.	Conceptual plan	TBD	Tetra Tech 2007
64 CR	Hf	Cowlitz RM 9.7 right bank bar and island enhancement.	Conceptual plan	TBD	Tetra Tech 2007
65 CR	P	Culvert replacement on Leckler Creek at Hazel Dell Road.	Conceptual plan	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
66 CR	Hrfi	Cowlitz RM 9.8 left bank riparian restoration: Remove revetment and some dredged material and create riparian and floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
67 CR	Hrfi	Cowlitz RM 10.5 left bank riparian restoration: Remove some dredged materials and create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
68 CR	Hrfi	Cowlitz RM 11.2 left bank bar and island enhancement: Place wood to promote side channel scour and provide cover.	Conceptual plan	TBD	Tetra Tech 2007
69 CR	Hrfi	Cowlitz RM 12.5 left bank side channel restoration and enhancement: Enhance low bar with remnant side channel by placing wood and minor excavation.	Conceptual plan	TBD	Tetra Tech 2007
70 CR	Hrfi	Cowlitz RM 12.5 right bank riparian restoration: Remove riprap and bioengineer as feasible, remove dredged materials to create riparian/floodplain bench	Conceptual plan	TBD	Tetra Tech 2007
71 CR	Hrfi	Cowlitz RM 13.5 left bank riparian restoration: Remove some dredged materials and bioengineer recent riprap placement to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
72 CR	Hfi	Cowlitz RM 14.0 left bank side channel restoration and enhancement: Excavate remnant side channel, place LWD.	Conceptual plan	TBD	Tetra Tech 2007
73 CR	Hrfi	Cowlitz RM 14.5 right bank side channel restoration and enhancement: Excavate remnant side channel, place LWD, plant riparian vegetation.	Conceptual plan	TBD	Tetra Tech 2007
113 CR	Hi	Cowlitz RM 15.0 left bank bar enhancement: Enhance low bar and Sandy Creek and backwater by placing wood and minor excavation.	New	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
74 CR	Hrfi	Cowlitz RM 16.0 right bank side channel restoration and enhancement: Create defined boat launch area and restore historic side channel and improve floodplain with plantings and wood.	Conceptual plan	TBD	Tetra Tech 2007
75 CR	P	Delameter Creek Culvert replacement at Delameter Road.	Conceptual plan	TBD	Tetra Tech 2007
76 CR	HrA	Fence off Delameter Creek from livestock and restore riparian at RM 4.	Conceptual plan	TBD	Tetra Tech 2007
77 CR	P	Monahan Creek Culvert replacement at Delameter Road.	Conceptual plan	TBD	Tetra Tech 2007
78 CR	Hr	Monahan Creek Riparian restoration: Remove Japanese knotweed along lower 4 miles and revegetate.	Conceptual plan	TBD	Tetra Tech 2007
79 CR	Hrfi	Cowlitz RM 18.5 left bank dredged materials removal to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
80 CR	Hrfi	Cowlitz RM 18.8 right bank bar and island enhancement: segregate boat launching from riparian zone and bars; cut chute overflow channels and restore floodplain/riparian habitat.	Conceptual plan	TBD	Tetra Tech 2007
81 CR	Hrfi	Cowlitz RM 19.8 left bank dredged materials removal to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
82 CR	Hrfi	Toutle River RM 0.2 right bank dredged materials removal to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
83 CR	Hrfi	Toutle River RM 3.2 right bank Off-channel restoration and enhancement: Reconnect off-channel ponds behind dredged material, enhance with LWD and riparian restoration.	Conceptual plan	TBD	Tetra Tech 2007
84 CR	Hrfi	Cowlitz RM 20.2 left bank dredged materials removal to	Conceptual plan	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
		create riparian/floodplain bench.			
85 CR	Hrfi	Cowlitz RM 22.2 left bank dredged materials removal to create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
86 CR	Hf	Cowlitz RM 23.0 left bank off-channel and floodplain restoration.	Conceptual plan	TBD	Tetra Tech 2007
87 CR	Hr	Cowlitz RM 23.2 right bank bar and island enhancement: Place LWD alongside channel and revegetate where appropriate on Hog Island.	Conceptual plan	TBD	Tetra Tech 2007
88 CR	P	Rock Creek Culvert replacement at West Side Highway.	Conceptual plan	TBD	Tetra Tech 2007
89 CR	PHr	Remove water control structure and reconnect Hill Creek; riparian revegetation along lower 1000-2000 feet of creek.	Conceptual plan	TBD	Tetra Tech 2007
90 CR	Hrf	Cowlitz RM 24.5 left bank riparian restoration: Slope back banks and create riparian/floodplain bench.	Conceptual plan	TBD	Tetra Tech 2007
91 CR	Hrfi	Lower Olequa Creek enhancement: Restore side channel and riparian zone, remove invasive species, place LWD.	Conceptual plan	TBD	Tetra Tech 2007
92 CR	A	Cowlitz RM 25.0 Acquire easements in active channel migration area.	Conceptual plan	TBD	Tetra Tech 2007
93 CR	Hrfi	Cowlitz RM 25.0 side channel restoration and enhancement: Remove car bodies, place LWD and riparian restoration.	Conceptual plan	TBD	Tetra Tech 2007
94 CR	Hri	Cowlitz RM 26.0 left bank riparian restoration: Slope back banks to create riparian bench; remove riprap; may need to move road in one area.	Conceptual plan	TBD	Tetra Tech 2007
95 CR	Hr	Cowlitz River habitat enhancements upstream of Cowlitz County (RM 27-43)	Conceptual plan	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
96 CR	Hf	Connect gravel ponds and other off-channel areas near RM 7 on the Coweeman River to provide rearing and overwintering habitat for juvenile salmonids.	New	TBD	Wade 2000a
97 CR	Hi	Coweeman Bedrock Channel Restoration. Install large diameter logs in various configurations on the Coweeman River in order to restore 2,700 feet of low gradient stream channel scoured to bedrock by historical log drives and other anthropological disturbances.	Underway	LCFEG	PRISM
98 CR	Hr	Coweeman riparian vegetation enhancement and knotweed control.	Underway	C/WCD	PRISM
99 CR	Hri	Explore opportunities to enhance shoreline habitat where bank armoring exists. This could be accomplished through bioengineering or by incorporation large wood into bank protection.	New	TBD	TWC

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.1.5. Mill, Abernathy, Germany Creek Assessment Unit

Prioritized restoration measures for the Lower Cowlitz basin are identified below as excerpted from the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (LCFRB 2010a):

1. Protect stream corridor structure and function;
2. Protect hillslope processes;
3. Restore degraded hillslope processes on forest, agricultural, and developed lands;
4. Restore floodplain function and channel migration processes along the lower mainstems and major tributaries;
5. Restore riparian conditions throughout the basin;
6. Restore degraded water quality with an emphasis on temperature;
7. Create/restore off-channel and side-channel habitat;
8. Restore channel structure and stability;
9. Provide for adequate instream flows during critical periods;

10. Restore access to habitat blocked by artificial barriers (priority locations in Tributaries to Mill Creek and Coal Creek).

A summary of restoration opportunities throughout the assessment unit is presented in Table 6-6 below.

Table 6-6. Restoration opportunities in Mill, Abernathy, and Germany Creeks (Assessment Units MC, AC and GC, respectively).

ID	Type*	Action	Status	Entity	Source Plan/ ID
100 All units	O	Seize opportunities to conduct voluntary floodplain restoration on lands being phased out of agricultural production. Survey landowners, build partnerships, and provide financial incentives.	New	NRCS/WCD, NGOs, WDFW, LCFRB, USACE, LCFEG	LCFRB 2010a/ M-A-G 4
101 All units	W	Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment	Expansion of existing program or activity	Cowlitz County, Cowlitz CD	LCFRB 2010a/ M-A-G 15
102 GC	P	Address fish passage barriers, particularly in Germany and Coal Creeks where 30-34% of the habitat is blocked	Expansion of existing program or activity	LCFRB, Cowlitz County	Wade 2002
103 AC	Hf	Enhance off channel habitat in Abernathy Creek near Sarah Creek, Two Bridges and Abernathy hatchery sites.	Underway	Cowlitz Tribe	HDR and Cramer Fish Sciences 2009; Inter-Fluve 2011
104 GC	Hf	Enhance off channel habitat in Germany Creek.	New	LCFRB, Cowlitz County	HDR and Cramer Fish Sciences 2009
105 AC GC	Hri	Construct engineered log jams and enhance riparian areas to produce future large woody debris in Abernathy and Germany Creeks.	Project underway on Abernathy Creek	LCFRB, Cowlitz County, Cowlitz Tribe	HDR and Cramer Fish Sciences 2009
106 All units	RHfi	Identify areas where channel modifications (LWD or large rocks) could help slow flows, capture scarce spawning gravels, reconnect floodplain habitat, and enhance instream channel diversity.	New	LCFRB, Cowlitz County	Wade 2002
107 All units	Hr	Target riparian restoration efforts along the most productive and/or degraded streams including the agricultural areas (generally lower and middle reaches) of Germany and Abernathy Creeks,	Project underway on Abernathy Creek	LCFRB, Cowlitz County, Cowlitz CD, Cowlitz Tribe	Wade 2002, HDR and Cramer Fish Sciences 2009

ID	Type*	Action	Status	Entity	Source Plan/ ID
		and the residential areas of Mill Creek.			
108 GC	M	Germany Creek Nutrient Enhancement. Placement of salmon carcass analogs and monitoring of salmon population response.	Underway	LCFEG	PRISM

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.1.6. South Fork Chehalis River Assessment Unit

The Chehalis Basin Salmon Habitat Restoration and Preservation Work Plan for WRIA 22 and 23 (Chehalis Basin Partnership Habitat Work Group 2008) identified several restoration recommendations for the Chehalis watershed, including several recommendations applicable to the upper South Fork Chehalis River. These recommendations include:

- Riparian restoration
  - Conifer underplanting
  - Control of invasive species
- Control excess sedimentation
  - Implement alternative methods of bank stabilization (bioengineering) in locations with excessive erosion (sediment input)
  - Abandon roads on steep geologically sensitive areas
  - Upgrade existing roads to comply with Forest Practices Act rules and regulations
  - Revegetate streaming and riverbanks for added protection from erosion
- Correct fish passage barriers
- Remove hard armoring or implement bioengineering techniques
- Enhance or restore potential off-channel, floodplain, and wetland habitat

6.2. City of Castle Rock

The most significant opportunities for restoration in the City of Castle Rock and its UGA include riparian and floodplain restoration. A summary of restoration opportunities identified within and supported by the City is presented in Table 6-7a.

Table 6-7a. Restoration opportunities in and supported by the City of Castle Rock (Assessment Unit CR).

ID	Type*	Action	Status	Entity	Source Plan/ ID
110 CR	Hri	Cowlitz RM 16.8 right bank tributary enhancement: Create riparian bench, place LWD and riparian restoration along lower end of Arkansas Creek	New	TBD	Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication
114 CR	Hrf	Channel and riparian restoration at lower Whittle Creek: Remove invasive species, revegetate, re-meander channel.	On-going	City of Castle Rock; Cowlitz Conservation District ; Castle Rock School District; WDFW	Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication
115 CR	Hfi	Reconnect backwater channel and place LWD at Janisch Creek, just north of the City limits. Consider re-meandering the creek away from railroad tracks.	On-going	City of Castle Rock; Cowlitz Conservation District; Castle Rock School District; WDFW	Tetra Tech 2007; TJ Kieran, City of Castle Rock, personal communication
116 CR	Hr	Restore and enhance riparian vegetation along the Cowlitz River, including School District site.	On-going	North County Recreation Assoc; Castle Rock School District; City of Castle Rock	TJ Kieran, City of Castle Rock, personal communication

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

In addition to the projects identified above in Table 6-7a, the projects identified in Table 6-7b are within the City of Castle Rock and its UGA, however, they are not necessarily supported by the City of Castle Rock.

Table 6-7b. Restoration opportunities in the City of Castle Rock (Assessment Unit CR).

ID	Type*	Action	Status	Entity	Source Plan/ ID
109 CR	Hrfi	Cowlitz RM 16.7 left bank bar and island enhancement: Enhance bar with LWD and riparian plantings and promote side channel maintenance	New	TBD	Tetra Tech 2007;
111 CR	Hr	Cowlitz RM 17.0 left bank riparian restoration: Setback or slope back levees and create riparian bench along Castle Rock	New	TBD	Tetra Tech 2007
112 CR	Hr	Cowlitz RM 17.0 right bank riparian restoration: Setback or slope back	New	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
		levees and create riparian bench along Castle Rock			

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.3. City of Kalama

Several potential restoration opportunities are present with the City of Kalama and its Urban Growth Area.

Two areas within the City are proposed as mitigation, meaning that they would be restored to compensate for an action (or actions) that negatively affect(s) ecological functions. As such, mitigation projects are not truly restoration projects, and they may or may not result in a net gain in ecological functions. These potential mitigation sites include a portion of the land around Kress Lake, which is primarily forested, and the land along the north and south banks of the Kalama River, west of I-5.

In addition to these areas, a summary of additional restoration opportunities is presented in Table 6-8 below.

Table 6-8. Restoration opportunities in the City of Kalama (Assessment Unit KA).

ID	Type*	Action	Status	Entity	Source Plan/ ID
117 KA	HfO	Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives	New	NRCS, C/W CD, NGOs, WDFW, LCFRB, USACE, Port of Kalama	LCFRB 2010a/ Kal 5
118 KA	YHw	Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5.	New	TBD	T. Rymer, NMFS, personal communication
119 KA	RHf	Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River	New	Cowlitz County/ City of Kalama	Wade 2000b
120 KA	Hf	Groundwater Channel, Left bank at RM 1.4	New	TBD	Powers and Tyler, 2009
121 KA	RHi	Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris)	New	TBD	TWC

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.4. City of Kelso

Several sites on the Cowlitz River in the City of Kelso have been used to deposit dredge spoils associated with the dredging following the eruption of Mount Saint Helens. These sites are predominantly under private ownership. Restoration of hydrologic connectivity and riparian vegetation at these sites could potentially significantly improve floodplain functions in the lower Cowlitz River.

A wetland, known as Hart's Lake, in the City of Kelso UGA is noted as an area for potential restoration. The City Parks Department owns a portion of the wetland and the abutting Coweeman shoreline. This area is identified in the City's Parks Plan as undeveloped open space. The area is within the floodplain of the Coweeman River, and has the potential to function as a backwater habitat during floods. As noted in Section 3.4, the portion of the parcel along the Coweeman shoreline is presently mowed. The shoreline would benefit from planting riparian shrubs and trees to provide shade to the Coweeman River and to improve fish and wildlife habitat. There may also be opportunities to improve hydrologic connectivity to the wetland from the west. Discussions are underway for potential wetland mitigation at Hart's Lake for impacts that may occur within shoreline jurisdiction at the Southwest Washington Regional Airport. As noted above, if used as mitigation, the project may or may not result in a net improvement of functions on a City-wide basis.

A summary of restoration opportunities is presented in Table 6-9 below.

Table 6-9. Restoration opportunities in the City of Kelso (Assessment Unit KE).

ID	Type*	Action	Status	Entity	Source Plan/ ID
122 KE	Hrfi	Cowlitz RM 1.0 Left Bank Side channel restoration and enhancement: Remove some dredged materials and reconnect side channel, create riparian bench.	Conceptual Design	TBD	Tetra Tech 2007
123 KE	Hrf	Coweeman RM 3.5 Right Bank Tributary enhancement: Reconnect remnant oxbow and restore riparian zone.	Conceptual Design	TBD	Tetra Tech 2007
124 KE	Hi	Coweeman RM 4.0 Tributary enhancement: Place LWD for sediment trapping, cover, and in-stream enhancement upstream of levees.	Conceptual Design	TBD	Tetra Tech 2007

ID	Type*	Action	Status	Entity	Source Plan/ ID
125 KE	Hri	Cowlitz RM 3.0 Left Bank Riparian restoration: Slope back banks to create riparian bench; remove riprap; revegetate with riparian species.	Conceptual Design	TBD	Tetra Tech 2007
126 KE	Hrf	Conduct floodplain restoration where feasible along the Cowlitz River. In particular, consider restoration of floodplain and riparian functions at former dredge disposal sites.	New	TBD	T. Rymer, NMFS, personal communication
127 KE	HrAR	Discontinue mowing and plant riparian vegetation along the shoreline in the Hart Lake Recreation Area. Evaluate potential to increase hydrologic connections to the wetland from the west.	New	City of Kalama Parks Department	TWC
128 KE	HrO	Plant native trees and shrubs along the shoreline at Tam O'Shanter Park. Consider opportunities for interpretive signage.	New	City of Kalama Parks Department	TWC
129 KE	RHfw	Explore opportunities to improve hydrologic and habitat connectivity from the Columbia River to Owl Creek and associated wetlands just east of Interstate-5.	New	TBD	T. Rymer, NMFS, personal communication
130 KE	RHi	Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris)	New	TBD	T. Rymer, NMFS, personal comm.

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

6.5. City of Woodland

There are several restoration sites available within the City of Woodland. The areas zoned for floodway are the most obvious areas for restoration and are generally found in the Lewis 13, 14 and 15 reaches. There are also restoration opportunities to found south of the CC Street Bridge within the floodway. This location has significant invasive species coverage and impacts from informal camping.

A summary of restoration opportunities is presented in Table 6-10 below.

Table 6-10. Restoration opportunities in the City of Woodland (Assessment Unit WO).

ID	Type*	Action	Status	Entity	Source Plan/ ID
131 WO	Hrf	Maintain and restore riparian vegetation within the designated floodway.	New	TBD	TWC
132 WO	Hr	Plant shoreline vegetation at Horseshoe Lake Park.	New	City of Woodland Parks Department	TWC
133 WO	Hr	Remove invasive vegetation and replant with native vegetation south of the CC Street Bridge.	New	TBD	City of Woodland

*TYPE = project type: H=habitat (f=floodplain/off-channel, w=wetland, i-instream, r=riparian), M=management, W=water quality, Y=hydrology, P= fish passage, A=acquisition/protection, R=research/investigation, G=regulatory, O=outreach

7. IMPLEMENTATION STRATEGY

7.1. Local/Regional Planning and Coordination

Cowlitz County and the cities of Castle Rock, Kalama, Kelso, and Woodland participate in the Cowlitz Wahkiakum Council of Governments (CWCOG). The Council of Governments provides a regional forum to address issues of mutual interest and concern, develop recommendations and provide technical services. Because the CWCOG focuses on regional and local planning, transportation planning, community and economic development planning, and technical assistance, it provides an opportunity for coordinated restoration planning and implementation. One potential mechanism to encourage implementation of shoreline restoration actions would be to incorporate shoreline restoration goals and projects into Capital Improvement Programs (CIP), Parks Master Plans, and Six-Year Transportation Improvement Plans.

The County and Cities will continue their association and involvement with their restoration partners. The County and Cities may also look for other time sensitive opportunities for involvement in regional restoration planning and implementation.

7.2. Funding Opportunities for Restoration

Some restoration projects and programs within the County could be funded by County general funds, utilities funds, or parks funding; however, many of the proposed habitat restoration projects will require outside funding through federal or state grants, as well as local, private, or non-profit matching funds. Projects may be funded in multiple phases, with different funding sources appropriate for each phase. It should be noted

that potential funding sources are not limited to those identified below. Potential grant sources and a description of their applications are provided in Table 7-1.

Table 7-1. Potential funding sources for shoreline restoration in Cowlitz County.

Funding Program	Description	Source/ Grant Administrator
Salmon Recovery Funding Board	Funding to improve important habitat conditions or watershed processes to benefit salmon and bull trout. Projects must go through selection by local lead entities and must address goals and actions defined in regional recovery plans or lead entity strategies.	Washington Recreation and Conservation Office
Aquatic Lands Enhancement Account	Funds the acquisition, improvement, or protection of aquatic lands for public purposes.	
Washington Wildlife Recreation Program	Funds a range of land protection and outdoor recreation, including park acquisition and development, habitat conservation, farmland preservation, and construction of outdoor recreation facilities. Provides funds to restore riparian vegetation.	
Family Forest Fish Passage Program	Provides funding to small forest landowners to repair or remove fish passage barriers. The state typically provides 75% – 100% of removal and replacement costs.	
Whole Watershed Restoration Initiative	Funds habitat restoration in Priority Basins. The lower Columbia River is one of the Priority Basins, including WRIA 25, 26, and 27. Funding for individual projects ranges from $20,000 to $100,000.	Ecotrust
Bonneville Power Administration	Funding for habitat projects to mitigate impacts of dam operations on the Columbia River.	Bonneville Power Administration
PacifiCorp	PacifiCorp provides annual funding to implement restoration that will benefit fish recovery and enhance fish habitat in the North Fork Lewis Basin.	PacifiCorp
Watershed Planning Act	Funding for local development of watershed plans for managing water resources and for protecting existing water rights.	Washington Department of Ecology
Centennial Clean Water Fund	Funds water quality infrastructure and projects to control non-point source pollution.	
Section 319	Funds non-point source pollution control projects.	

Funding Program	Description	Source/ Grant Administrator
Clean Water State Revolving Fund	Provides low interest and forgivable principal loan funding for wastewater treatment construction projects, eligible nonpoint source pollution control projects, and eligible Green projects.	
Conservation Reserves Enhancement Program	This program provides funds to farmers who maintain riparian buffers on on-site waterbodies. The funds cover technical assistance, plant costs, and land "rental" fees.	Cowlitz Conservation District
Conservation Partners	Provides technical assistance to farmers, ranchers, foresters and other private landowners to optimize wildlife habitat conservation on private lands.	National Fish and Wildlife Foundation
Five Star and Urban Waters Restoration Fund	Funds community stewardship and restoration of coastal, wetland and riparian ecosystems.	
NOAA Open Rivers Initiative	Funds the removal of obsolete dams and other stream barriers to improve fisheries, enhance public safety and boost local economies through benefits resulting from removal. Awards range from $100,000 to $3,000,000.	NOAA's Restoration Center
American Sportfishing Association's FishAmerica Foundation Grants	Fund marine and anadromous fish habitat restoration projects that benefit recreationally fished species. Typical awards range from $10,000 to $75,000.	
Stream Barrier Removal Grants	Funds stream barrier removal projects that benefit anadromous fish. Grant program is administered through American Rivers, in partnership with NOAA's Restoration Center.	
Partners for Fish and Wildlife	Provides technical and financial assistance to landowners to improve their property for targeted fish and wildlife species without a long-term easement contract.	U.S. Fish and Wildlife Service
National Fish Passage Program	Funds priority projects to improve fish passage.	
North American Wetlands Conservation Act Grants Program	Provides matching funds for acquisition, enhancement, and restoration of wetlands that benefit waterfowl habitat.	

7.3. Development Incentives

The County and cities may provide development incentives for restoration, including development code incentives (e.g., height, density, impervious area or lot coverage). This may serve to encourage developers to try to be more imaginative or innovative in

their development designs to include conservation efforts. Examples include the installation of rain gardens or LID features above and beyond DOE requirements, shared parking, exceeding landscape or open space requirements, or other innovative measures that benefit the environment and the citizenry.

7.4. Landowner Outreach and Engagement

The County and cities could emphasize and accomplish restoration projects by engaging community volunteers and coordinating with non-profit organizations. Volunteer engagement can have the added benefit of encouraging or guiding local residents to become more effective stewards of the land. Programs that provide ongoing assistance and resources to landowners through plantings, equipment use or technical support can also have a far reaching impact on shoreline functions.

7.5. Maximizing Mitigation Outcomes

Although projects identified in this plan are identified as restoration opportunities, this document may serve as a source to identify large-scale opportunities that could be used to optimize mitigation outcomes where on-site mitigation opportunities are limited due to building site constraints, limited potential ecological gains, or other site-specific factors.

These large-scale mitigation projects could be implemented through concurrent, permittee responsible mitigation, or through mitigation banking or an in-lieu fee program. It should be noted that the application of mitigation banking and in-lieu fee programs is not limited to wetlands and could be applied to mitigation for impacts to shorelines and endangered species. Whereas mitigation banking requires capital investment and ecological enhancement prior to the exchange of debits and credits, an in-lieu-fee program establishes a program in which funds are collected from permittees for unavoidable impacts, and these funds are pooled and used to implement mitigation projects within three growing seasons of the impact.

7.6. Monitoring

Monitoring of the effectiveness of restoration actions enables opportunities to adaptively manage future restoration efforts to maximize project outcomes. The Lower Columbia Fish Recovery Board developed a research, monitoring, and evaluation (RM&E) program plan in 2010 (LCFRB 2010c). LCFRB's RM&E Program includes recommendations for habitat status and trends monitoring, fish status and trends monitoring, project implementation and effectiveness monitoring. The program also identified key research needs. LCFRB is coordinating with regional, state, and federal

partners to develop an integrated status and trends monitoring (ISTM) design for the Lower Columbia. The LCFRB is presently working to bridge efforts of the ISTM program with municipal stormwater monitoring and reporting requirements. This sort of coordinated effort is expected to maximize monitoring resources to track changes in ambient watershed conditions over time and provide necessary information and understanding to guide future watershed management decisions.

8. REFERENCES

AMEC Earth and Environmental. 2010. North Fork Toutle Fish Passage and Sediment Assessment. Prepared for the Lower Columbia Fish Recovery Board.

Chehalis Basin Partnership Habitat Work Group. 2008. The Chehalis Basin Salmon Habitat Restoration and Preservation Work Plan WRIA 22 and 23. Updated September 2008.

Cowlitz County. 2012. Six Year Transportation Improvement Program: 2013-2018.

HDR and Cramer Fish Sciences. 2009. Abernathy and Germany Creeks Intensively Monitored Treatment Plan. Prepared for the Lower Columbia Fish Recovery Board, January 2009.

Inter-Fluve. 2011. Abernathy Creek Project Design: Final Design Report. Prepared for the Lower Columbia Fish Recovery Board, June 2011.

Inter-Fluve, Stillwater Sciences, and Berger ABAM. 2009. Lewis River- Eagle Island: Project Identification and Design. Prepared for Lower Columbia Fish Recovery Board, December 2009.

Lower Columbia Fish Recovery Board. 2010a. Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan.

Lower Columbia Fish Recovery Board. 2010b. 2010 Habitat Strategy. Available at: http://www.lcfrb.gen.wa.us/2010%20Habitat%20Strategy/2010%20HWS.htm. [Accessed March 8, 2013]

Lower Columbia Fish Recovery Board. 2010c. Research, Monitoring, and Evaluation Program for Lower Columbia Salmon and Steelhead.

Lower Columbia Estuary Partnership. 2011. Lower Columbia River Estuary Plan: 2011 Comprehensive Conservation and Management Plan Update.

MPC and EA Blumen. 2010. Final Vision Report: Cowlitz County Comprehensive Plan Visioning Process. Prepared for Cowlitz County, November 2010.

PacifiCorp and PUD #1 of Cowlitz County. 2004. Joint Explanatory Statement for the Lewis River Hydroelectric Project Settlement Agreement. Merwin (P-935), Yale (P- 2071), Swift No. 1 (P-2111), Swift No. 2 (P-2213).

Powers, P. and M. Tyler. 2009. Lower Kalama River Off-Channel Habitat Assessment. Prepared for the Lower Columbia Fish Enhancement Group and Lower Columbia Fish Recovery Board.

R2 Resource Consultants, Inc. and Mobrand Biometrics, Inc. (R2 and MBI). 2004. Kalama, Washougal and Lewis River Habitat Assessments. Prepared for the Lower Columbia Fish Recovery Board.

RW Beck. 2000. Comprehensive Flood and Drainage Management Plan. Prepared for the City of Woodland.

TetraTech. 2007. Lower Cowlitz River and Floodplain Habitat Restoration Project Siting and Design: Final Revised Report. Prepared for the Lower Columbia Fish Enhancement Group and Lower Columbia Fish Recovery Board.

The Watershed Company and Parametrix. September 2012. DRAFT Shoreline Analysis Report for Shorelines in Cowlitz County and the Cities of Castle Rock, Kalama, Kelso, and Woodland. Prepared for the Cowlitz-Wahkiakum Council of Governments, Kelso, WA.

U.S. Army Corps of Engineers (Corps). 2013. Lower Columbia Ecosystem Restoration General Investigation, Department of Ecology Briefing. February 26, 2013.

U.S. Army Corps of Engineers (Corps). 2012. Review Plan for Lower Columbia River Ecosystem Restoration, Oregon and Washington General Investigation, Feasibility Study. December 3, 2012.

Wade, G. 2000a. Salmon and Steelhead Habitat Limiting Factors: Water Resource Inventory Area 26- Final Report. Prepared for the Washington State Conservation Commission.

Wade, G. 2000b. Salmon and Steelhead Habitat Limiting Factors: Water Resource Inventory Area 27- Final Report. Prepared for the Washington State Conservation Commission.

Wade, G. 2002. Salmon and Steelhead Habitat Limiting Factors: Water Resource Inventory Area 25- Final Report. Prepared for the Washington State Conservation Commission.

Zimmerman, M., K. Krueger, B. Ehinger, P. Roni, B. Bilby, J. Walters, and T. Quinn. 2012. Intensively Monitored Watersheds Program: An Updated Plan to Monitor Fish and Habitat Responses to Restoration Actions in the Lower Columbia Watersheds.

9. LIST OF ACRONYMS AND ABBREVIATIONS

BPA .....Bonneville Power Administration
CIP.....Capital Improvement Projects
Corps.....U.S. Army Corps of Engineers
CMZ .....Channel migration zone
C/WCD .....Cowlitz/Wahkiakum Conservation District
CWCOG.....Cowlitz Wahkiakum Council of Governments
Ecology .....Washington Department of Ecology
FCRPS .....Federal Columbia River Power System
FPR .....Forest Practices Rules
Ft.....Feet
IMW .....Intensively Monitored Watershed
ISTM.....Integrated Status and Trends Monitoring
LCEP .....Lower Columbia Estuary Partnership
LCFEG .....Lower Columbia Fish Enhancement Group
LCFRB.....Lower Columbia Fish Recovery Board
LID.....Low Impact Development
LWD.....Large Woody Debris
OHWM .....Ordinary High Water Mark
MOA .....Memorandum of Agreement
NF .....North Fork
NGOs .....Non-governmental organizations
NOAA.....National Oceanographic and Atmospheric Administration
NPDES.....National Pollutant Discharge Elimination System
NRCS.....Natural Resource Conservation Service
PUD.....Public Utility District
RM.....River Mile
RM&E .....Research, Monitoring, and Evaluation
SMP .....Shoreline Master Program
SRS.....Sediment Retention Structure
TWC .....The Watershed Company
UGA .....Urban Growth Area
USFS.....United States Forest Service
USFWS.....U.S. Fish and Wildlife Service
WAC.....Washington Administrative Code

WDFW .....Washington Department of Fish and Wildlife
WDNR .....Washington Department of Natural Resources
WRIA .....Water Resource Inventory Area

APPENDIX A

Map of Potential Restoration Project Sites

RESTORATION PLAN

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Columbia River Assessment Unit

1. Protect existing rearing habitat to ensure no further degradation. H
2. Increase shallow water peripheral and side channel habitats toward historic levels. H
3. Restore connectivity between river and floodplain, tidally influenced reaches of tributaries, as well as in-river habitats. H
4. Reduce predation mortality on emigrating juveniles. M
5. Reduce contaminant exposure of emigrating juveniles. W
6. Document the interaction between emigrating juvenile salmonids and introduced species; minimize negative interactions. R M
7. Develop an understanding of emigrating juvenile salmonid life history diversity and habitat use in the lower mainstem, estuary, and plume. R
8. Maintain favorable water flow and temperature throughout migration period. Y W
9. Reduce predation mortality on migrating adults. M
10. Protect existing spawning habitat to ensure no further net degradation. A G
11. Maintain favorable water flow and temperature throughout mainstem spawning and incubation period. Y W

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

- H Habitat-related
- W Water quality
- M Management
- Y Hydrologic
- P Fish passage
- A Habitat acquisition and/or protection
- R Research and investigation
- G Regulatory
- O Outreach

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 1 2 4 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Lewis River Assessment Unit

12. Manage regulated stream flows to provide for critical components of the natural flow regime [Y][G]
13. Conduct floodplain restoration where feasible along the mainstem and in major tributaries that have experienced channel confinement. Build partnerships with landowners and agencies and provide financial incentives [H][O]
14. Address water quality issues through the development and implementation of water quality clean-up plans (TMDLs) [W][G]
15. Limit intensive recreational use of the mainstem Lewis during critical periods [A][G]
16. Instream large woody debris, riparian, and side-channel enhancement in the Eagle Island area. [H]
17. Off Channel habitat enhancement at RM 13 [H]
18. Anadromous fish passage at Merwin and Swift dams. [P]
19. Continue to install large woody debris below Merwin Dam. [H]
20. Monitor and maintain gravel conditions below Merwin Dam for spawning habitat. [M][H]
21. Monitor predator relationships in Lake Merwin and manage as necessary. [M]
22. Continue to manage wildlife habitat and forest resources per the integrated Wildlife Habitat Management Plans [M][G]
23. WRIA 27/28 Nutrient Enhancement. Disperse surplus hatchery salmon carcasses in high-priority mainstem and tributary habitat. [M]

00 Site specific project (mapped)
00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality		
M	Management	R	Research and investigation
Y	Hydrologic	G	Regulatory
P	Fish passage	O	Outreach

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 1 2 4 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

The Watershed Company
Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

RESTORATION PLAN

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Kalama River Assessment Unit

24. Fully implement and enforce the Forest Practices Rules (FPRs) on private timber lands in order to afford protections to riparian areas, sediment processes, runoff processes, water quality, and access to habitats G

25. Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives G H O

26. Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment W

27. Address potential low-flow and thermal passage problems on the bar at the mouth of the Kalama Y W P

27 Assess and look for solutions to gravel and debris buildup near the mouths of tributaries in the upper river R P

29. Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River H

30 Ledgett Groundwater Channel, Left bank at RM 2.5. Create 10,400 sq. meters of year round rearing habitat with a potential for some spawning habitat. H

31 Pipeline Removal and LWD, Left bank at RM 2.2 H

32 Low Water Fish Passage, Left bank at RM 0. P Y

33 Lower Kalama Reach 1A Tidal Design: Install large wood structures to increase salmonid rearing and holding cover at the mouth of the Kalama River. H

34 Port Tidal and Backwater Channels, Left bank at RM 0.1 H

35 Lower Kalama Habitat Enhancement. Install approximately 12 wood structures to improve and expand pool and riffle habitat; restore 5 acres of riparian habitat; enhance 500 feet of existing side channel with woody debris. H

36 Spencer Creek Riparian and LWD at RM 0.5. Restore riparian, spawning, and rearing habitat. The mouth of Spencer Creek is at Kalama RM 1.8 H

37 Fish Passage Culvert, Spencer Creek at RM 1.8 P

38. Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris) R H

39 Port of Kalama Groundwater Channel, Right bank at RM 2.2. Create off-channel rearing habitat. H

40 GW Channel System (private), Right bank at RM 2.1 H

41 Riprap Removal/Floodplain Reconnection, Right bank at RM 2.4 H

42 Active Side Channel, Right bank at RM 1.8 H

43 Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5. H Y

44. WRIA 27/28 Nutrient Enhancement. Dispersal of surplus hatchery salmon carcasses in high-priority mainstem and tributary habitat. M

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

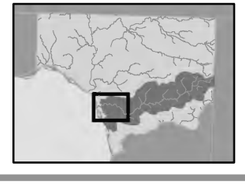
Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.3 0.6 1.2 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.



Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Cowlitz River Assessment Unit

45. Manage regulated stream flows [Y] [G]
46. Monitor and notify FERC of significant license violations, enforce and encourage implementation of section 7 [R]
47. Conduct floodplain restoration along the mainstem and in major tributaries [H] [R] [O]
48. Expand local government Comprehensive Planning [G]
49. Assess, upgrade, and replace on-site sewage systems [W]
50. Address fish passage and sediment issues at the Sediment Retention Structure on the NF Toutle. [P] [W]
51. Assess and, if possible, alter the Silver Lake Dam to increase flows in Outlet Creek [Y] [P]
52. Manage federal forest lands according to the Northwest Forest Plan. [G]
53. Address temperature impairments through TMDLs [W]
54. Assess, repair, and where possible, decommission roads [W]
55. Look for opportunities to increase LWD supplies in stream systems. [R] [H]
56. Replant degraded riparian areas with native conifers. [H]
57. Address fish passage barriers in the Toutle River and tributaries [P] [R]
58. Cowlitz RM 0.5 RB remove dredged materials, create riparian/wetland bench [H]
59. Cowlitz RM 7.3 RB remove dredged materials, create riparian/floodplain bench, construct setback levee if necessary. [H]
60. Cowlitz RM 8.5 RB set back levee, revegetate riparian/floodplain bench [H]
61. Cowlitz RM 9.0 LB rdredged materials removal, create riparian/floodplain bench [H]
62. Place LWD and vegetate with willows (mouth of Ostrander Creek) [H]
63. Remove noxious weeds and restore riparian zone [H]
64. Cowlitz RM 9.7 RB bar and island enhancement [H]
65. Culvert replacement on Leckler Creek at Hazel Dell Road [P]
66. Cowlitz RM 9.8 LB riparian restoration [H]
67. Cowlitz RM 10.5 LB riparian restoration [H]
68. Cowlitz RM 11.2 LB bar and island enhancement [H]
69. Cowlitz RM 12.5 LB side channel restoration and enhancement [H]
70. Cowlitz RM 12.5 RB riparian restoration [H]

(continued on next map)

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

- [H] Habitat-related
- [W] Water quality
- [M] Management
- [Y] Hydrologic
- [P] Fish passage
- [A] Habitat acquisition and/or protection
- [R] Research and investigation
- [G] Regulatory
- [O] Outreach

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

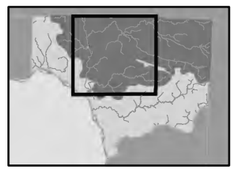
0 0.75 1.5 3 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

THE WATERSHED COMPANY

Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.



RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Cowlitz River Assessment Unit

(continued from previous map)

71 Cowlitz RM 13.5 LB riparian restoration H
72 Cowlitz RM 14.0 LB side channel restoration and enhancement H
73 Cowlitz RM 14.5 RB side channel restoration and enhancement H
74 Cowlitz RM 16.0 RB side channel restoration and enhancement H
75 Delameter Creek Culvert replacement at Delameter Road P
76 Fence off Delameter Creek from livestock and restore riparian at RM 4 H
77 Monahan Creek Culvert replacement at Delameter Road P
78 Monahan Creek Riparian restoration H
79 Cowlitz RM 18.5 LB remove dredged materials, create riparian/floodplain bench H
80 Cowlitz RM 18.8 RB bar and island enhancement H
81 Cowlitz RM 19.8 LB remove dredged materials, create riparian/floodplain bench H
82 Toutle RM 0.2 RB remove dredged materials, create riparian/floodplain bench H
83 Toutle RM 3.2 RB Off-channel restoration and enhancement H
84 Cowlitz RM 20.2 LB remove dredged materials, create riparian/floodplain bench H
85 Cowlitz RM 22.2 LB remove dredged materials, create riparian/floodplain bench H
86 Cowlitz RM 23.0 LB off-channel and floodplain restoration H
87 Cowlitz RM 23.2 RB bar and island enhancement H
88 Rock Creek Culvert replacement at West Side Highway. P
89 Remove water control structure, reconnect Hill Creek, revegetation H
90 Cowlitz RM 24.5 LB riparian restoration H
91 Lower Olequa Creek enhancement H
92 Acquire easements in active channel migration area. A
93 Cowlitz RM 25.0 side channel restoration and enhancement H
94 Cowlitz RM 26.0 LB riparian restoration H
95. Cowlitz River habitat enhancements upstream of Cowlitz County H
96 Connect gravel ponds and other off-channel areas H
97 Coweeman Bedrock Channel Restoration H
98. Coweeman riparian vegetation enhancement and knotweed control H
99. Explore opportunities to enhance shoreline habitat where bank armoring exists H

00 Site specific project (mapped)
00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

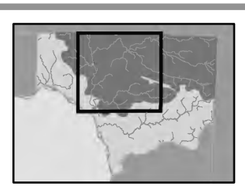
Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.75 1.5 3 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

THE WATERSHED COMPANY
Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.



RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Mill, Abernethy, Germany Assessment Unit

100. Seize opportunities to conduct voluntary floodplain restoration on lands being phased out of agricultural production. Survey landowners, build partnerships, and provide financial incentives. O

101. Assess, upgrade, and replace on-site sewage systems that may be contributing to water quality impairment W

102. Address fish passage barriers, particularly in Germany and Coal Creeks where 30-34% of the habitat is blocked P

103 Enhance off channel habitat in Abernathy Creek near Sarah Creek, Two Bridges and Abernathy hatchery sites. H

104 Enhance off channel habitat in Germany Creek. H

105. Construct engineered log jams and enhance riparian areas to produce future large woody debris in Abernathy and Germany Creeks. H

106. Identify areas where channel modifications (LWD or large rocks) could help slow flows, capture scarce spawning gravels, reconnect floodplain habitat, and enhance instream channel diversity. R H

107. Target riparian restoration efforts along the most productive and/or degraded streams including the agricultural areas (generally lower and middle reaches) of Germany and Abernathy Creeks, and the residential areas of Mill Creek. H

108. Germany Creek Nutrient Enhancement. Placement of salmon carcass analogs and monitoring of salmon population response. M

00 Site specific project (mapped)
00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality		
M	Management	R	Research and investigation
Y	Hydrologic	G	Regulatory
P	Fish passage	O	Outreach

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.5 1 2 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

THE WATERSHED COMPANY

Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY · CASTLE ROCK · KALAMA · KELSO · WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Castle Rock Assessment Unit

109 Cowlitz RM 16.7 left bank bar and island enhancement: Enhance bar with LWD and riparian plantings and promote side channel maintenance H

110 Cowlitz RM 16.8 right bank tributary enhancement: Create riparian bench, place LWD and riparian restoration along lower end of Arkansas Creek H

111 Cowlitz RM 17.0 left bank riparian restoration: Setback or slope back levees and create riparian bench along Castle Rock H

112 Cowlitz RM 17.0 right bank riparian restoration: Setback or slope back levees and create riparian bench along Castle Rock H

113 Cowlitz RM 15.0 left bank bar enhancement: Enhance low bar and Sandy Creek and backwater by placing wood and minor excavation. H

114 Channel and riparian restoration at lower Whittle Creek: Remove invasive species, revegetate, remeander channel. H

115 Reconnect backwater channel and place LWD at Janisch Creek, just north of the City limits. Consider remeandering the creek away from railroad tracks. H

116 Restore and enhance riparian vegetation along the Cowlitz River, including School District site. H

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.15 0.3 0.6 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

THE WATERSHED COMPANY

Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

RESTORATION PLAN

COWLITZ COUNTY
SHORELINE MASTER PROGRAM

Kalama
Assessment Unit

117. Conduct floodplain restoration where feasible along the lower mainstem that has experienced channel confinement. Build partnerships with the Port of Kalama and other landowners and provide financial incentives H O

118 Improve hydrologic and habitat connectivity from the Columbia River to wetlands just east of Interstate-5. Y H

119 Look for opportunities to increase and enhance off-channel and rearing habitat within the lower Kalama River Groundwater Channel, Left bank at RM 1.4 R H

120. Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris) R H

121. Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris) R H

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.15 0.3 0.6 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY · CASTLE ROCK · KALAMA · KELSO · WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Kelso Assessment Unit

121 Cowlitz RM 1.0 Left Bank Side channel restoration and enhancement: Remove some dredged materials and reconnect side channel, create riparian bench. H

122 Coweeman RM 3.5 Right Bank Tributary enhancement: Reconnect remnant oxbow and restore riparian zone. H

123 Coweeman RM 4.0 Tributary enhancement: Place LWD for sediment trapping, cover, and in-stream enhancement upstream of levees. H

124 Cowlitz RM 3.0 Left Bank Riparian restoration: Slope back banks to create riparian bench; remove riprap; revegetate with riparian species. H

126 Conduct floodplain restoration where feasible along the Cowlitz River. In particular, consider restoration of floodplain and riparian functions at former dredge disposal sites. H

127 Discontinue mowing and plant riparian vegetation along the shoreline in the Hart Lake Recreation Area. Evaluate potential to increase hydrologic connections to the wetland from the west. H A R

128 Plant native trees and shrubs along the shoreline at Tam O'Shanter Park. Consider opportunities for interpretive signage. H O

129 Explore opportunities to improve hydrologic and habitat connectivity from the Columbia River to Owl Creek and associated wetlands just east of Interstate-5. R H

130. Pursue opportunities to reduce the effects of existing hardened shoreline armoring or replace or modify existing armoring with softer alternatives (e.g., large woody debris) R H

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

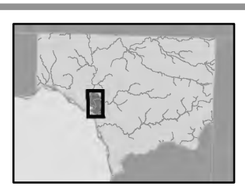
0 0.35 0.7 1.4 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

The Watershed Company

Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.



RESTORATION PLAN

Cowlitz County Partnership
Shoreline Master Program Update
COWLITZ COUNTY • CASTLE ROCK • KALAMA • KELSO • WOODLAND

COWLITZ COUNTY SHORELINE MASTER PROGRAM

Woodland Assessment Unit

130 Maintain and restore riparian vegetation within the designated floodway. H

131 Plant shoreline vegetation at Horseshoe Lake Park. H

132 Remove invasive vegetation and replant with native vegetation south of the CC Street Bridge. H

00 Site specific project (mapped)

00. Non-site specific project (unmapped)

Restoration Action Types

H	Habitat-related	A	Habitat acquisition and/or protection
W	Water quality	R	Research and investigation
M	Management	G	Regulatory
Y	Hydrologic	O	Outreach
P	Fish passage		

Notes: Project locations are estimated only. Please refer to the Cowlitz County Restoration Plan document for more details.

Data sources: Cowlitz County, City of Castle Rock, City of Woodland, Lower Columbia Fish Recovery Board, Habitat Work Schedule, Department of Ecology, Tetra Tech, PRISM, USGS, Interfluve, PacifiCorp, The Watershed Company.

0 0.175 0.35 0.7 Miles

Date: 6/24/2013
Name: Restoration_Plan_2013-06-11

The Watershed Company

Parametrix

All features depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.

APPENDIX E

Exemptions from a Shoreline Substantial Development Permit

Introduction

Substantial development as defined by this program and RCW 90.58.030 requires approval from the City through a Shoreline Substantial Development Permit (SSDP) unless:

A. The substantial development is below the threshold levels established in WAC 17327-040(2), Developments Exempt from Substantial Development Permit Requirement, listed below; or

B. The substantial development is one of the actions described in WAC 173-27-045, Developments Not Subject to the Shoreline Management Act, listed below.

In all cases, if WAC 173-27-040 or WAC 173-27-045 are amended, the amended version supersedes the lists of exemptions provided below.

Any person claiming exemption from the permit requirements of this Program as a result of the exemptions specified in this section shall make application for a Shoreline Letter of Exemption (SLE) as described in Chapter 8 of this Program.

If any part of a proposed development is not eligible for exemption, then a shoreline permit is required for the entire proposed development project.

Any development which occurs within the regulated shorelines of the state, whether it requires a permit or not, must be consistent with the intent of the Act and this Program.

WAC 173-27-040(2) –

Developments Exempt from Substantial Development Permit Requirement

[Statutory Authority: RCW 90.58.030 (3)(e), 90.58.045, 90.58.065, 90.58.140(9), 90.58.143, 90.58.147, 90.58.200, 90.58.355, 90.58.390, 90.58.515, 43.21K.080, 71.09.250, 71.09.342, 77.55.181, 89.08.460, chapters 70.105D, 80.50 RCW. WSR 07-02-086 (Order 05-12), § 17327-040, filed 1/2/07, effective 2/2/07. Statutory Authority: RCW 90.58.140(3) and [90.58].200. WSR 96-20-075 (Order 95-17), § 173-27-040, filed 9/30/96, effective 10/31/96.]

(2) The following developments shall not require substantial development permits:

(a) Any development of which the total cost or fair market value, whichever is higher, does not exceed seven thousand and forty-seven dollars ($7,047), if such development does not materially interfere with the normal public use of the water or shorelines of the state. The dollar threshold established in this subsection must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the Bureau of Labor and

Statistics, United States Department of Labor. The office of financial management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the *Washington State Register* at least one month before the new dollar threshold is to take effect. For purposes of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW 90.58.030 (2)(c). The total cost or fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials;

(b) Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment;

(c) Construction of the normal protective bulkhead common to single-family residences. A "normal protective" bulkhead includes those structural and nonstructural developments installed at or near, and parallel to, the ordinary high water mark for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used as backfill. When an existing bulkhead is being repaired by construction of a vertical wall fronting the existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings. When a bulkhead has deteriorated such that an ordinary high water mark has been established by the presence and action of water landward of the bulkhead then the replacement bulkhead must be located at or near the actual ordinary high water mark. Beach nourishment and bioengineered erosion control projects may be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the department of fish and wildlife.

(d) Emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, pursuant to

chapter 90.58 RCW, these regulations, or the local master program, obtained. All emergency construction shall be consistent with the policies of chapter 90.58 RCW and the local master program. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency;

(e) Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities on shorelands, construction of a barn or similar agricultural structure, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels: Provided, that a feedlot of any size, all processing plants, other activities of a commercial nature, alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations;

(f) Construction or modification of navigational aids such as channel markers and anchor buoys;

(g) Construction on shorelands by an owner, lessee or contract purchaser of a single-family residence for their own use or for the use of their family, which residence does not exceed a height of thirty-five feet above average grade level and which meets all requirements of the state agency or local government having jurisdiction thereof, other than requirements imposed pursuant to chapter 90.58 RCW. "Single-family residence" means a detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance. An "appurtenance" is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and the perimeter of a wetland. On a statewide basis, normal appurtenances include a garage; deck; driveway; utilities; fences; installation of a septic tank and drainfield and grading which does not exceed two hundred fifty cubic yards and which does not involve placement of fill in any wetland or waterward of the ordinary high water mark. Local circumstances may dictate additional interpretations of normal appurtenances which shall be set forth and regulated within the applicable master program. Construction authorized under this exemption shall be located landward of the ordinary high water mark;

(h) Construction of a dock, including a community dock, designed for pleasure craft only, for the private noncommercial use of the owner, lessee, or contract purchaser of single-family and multiple-family residences. A dock is a landing and moorage facility for watercraft and does not include recreational decks, storage facilities or other appurtenances. This exception applies if either:

(i) In salt waters, the fair market value of the dock does not exceed two thousand five hundred dollars; or

(ii) In fresh waters the fair market value of the dock does not exceed:

(A) Twenty-two thousand five hundred dollars ($22,500) for docks that are constructed to replace existing docks, are of lesser square footage than the existing dock being replaced; or

(B) Eleven thousand two hundred ($11,200) dollars for all other docks constructed in fresh waters.

However, if subsequent construction occurs within five years of completion of the prior construction, and the combined fair market value of the subsequent and prior construction exceeds the amount specie above, the subsequent construction shall be considered a substantial development for the purpose of this chapter.

For purposes of this section salt water shall include the tidally influenced marine and estuarine water areas of the state including the Pacific Ocean, Strait of Juan de Fuca, Strait of Georgia and Puget Sound and all bays and inlets associated with any of the above;

(i) Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored groundwater from the irrigation of lands;

(j) The marking of property lines or corners on state-owned lands, when such marking does not significantly interfere with normal public use of the surface of the water;

(k) Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed or utilized primarily as a part of an agricultural drainage or diking system;

(l) Any project with a certification from the governor pursuant to chapter 80.50 RCW;

(m) Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:

(i) The activity does not interfere with the normal public use of the surface waters;

(ii) The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;

(iii) The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

(iv) A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the local jurisdiction to ensure that the site is restored to preexisting conditions; and

(v) The activity is not subject to the permit requirements of RCW 90.58.550;

(n) The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the department of agriculture or the department of ecology jointly with other state agencies under chapter 43.21C RCW;

(o) Watershed restoration projects as defined herein. Local government shall review the projects for consistency with the shoreline master program in an expeditious manner and shall issue its decision along with any conditions within forty-five days of receiving all materials necessary to review the request for exemption from the applicant. No fee may be charged for accepting and processing requests for exemption for watershed restoration projects as used in this section.

(i) "Watershed restoration project" means a public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities:

(A) A project that involves less than ten miles of stream reach, in which less than twenty-five cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings;

(B) A project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or

(C) A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state, provided that any structure, other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than two hundred square feet in floor area and is located above the ordinary high water mark of the stream.

(ii) "Watershed restoration plan" means a plan, developed or sponsored by the department of fish and wildlife, the department of ecology, the department of natural resources, the department of transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream,

stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act;

(p) A public or private project that is designed to improve fish or wildlife habitat or fish passage, when all of the following apply:

(i) The project has been approved in writing by the department of fish and wildlife;

(ii) The project has received hydraulic project approval by the department of fish and wildlife pursuant to chapter 77.55 RCW; and

(iii) The local government has determined that the project is substantially consistent with the local shoreline master program. The local government shall make such determination in a timely manner and provide it by letter to the project proponent.

Fish habitat enhancement projects that conform to the provisions of RCW 77.55.181 are determined to be consistent with local shoreline master programs, as follows:

(A) In order to receive the permit review and approval process created in this section, a fish habitat enhancement project must meet the criteria under (p)(iii)(A)(I) and (II) of this subsection:

(I) A fish habitat enhancement project must be a project to accomplish one or more of the following tasks:

- Elimination of human-made fish passage barriers, including culvert repair and replacement;
- Restoration of an eroded or unstable streambank employing the principle of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or
- Placement of woody debris or other instream structures that benefit naturally reproducing fish stocks.

The department of fish and wildlife shall develop size or scale threshold tests to determine if projects accomplishing any of these tasks should be evaluated under the process created in this section or under other project review and approval processes. A project proposal shall not be reviewed under the process created in this section if the department determines that the scale of the project raises concerns regarding public health and safety; and

(II) A fish habitat enhancement project must be approved in one of the following ways:

- By the department of fish and wildlife pursuant to chapter 77.95 or 77.100 RCW;
- By the sponsor of a watershed restoration plan as provided in chapter 89.08 RCW;

- By the department as a department of fish and wildlife-sponsored fish habitat enhancement or restoration project;
- Through the review and approval process for the jobs for the environment program;
- Through the review and approval process for conservation district-sponsored projects, where the project complies with design standards established by the conservation commission through interagency agreement with the United States Fish and Wildlife Service and the natural resource conservation service;
- Through a formal grant program established by the legislature or the department of fish and wildlife for fish habitat enhancement or restoration; and
- Through other formal review and approval processes established by the legislature.

(B) Fish habitat enhancement projects meeting the criteria of (p)(iii)(A) of this subsection are expected to result in beneficial impacts to the environment. Decisions pertaining to fish habitat enhancement projects meeting the criteria of (p)(iii)(A) of this subsection and being reviewed and approved according to the provisions of this section are not subject to the requirements of RCW 43.21C.030 (2)(c).

(C)(I) A hydraulic project approval permit is required for projects that meet the criteria of (p)(iii)(A) of this subsection and are being reviewed and approved under this section. An applicant shall use a joint aquatic resource permit application form developed by the office of regulatory assistance to apply for approval under this chapter. On the same day, the applicant shall provide copies of the completed application form to the department of fish and wildlife and to each appropriate local government. Local governments shall accept the application as notice of the proposed project. The department of fish and wildlife shall provide a fifteen-day comment period during which it will receive comments regarding environmental impacts. Within forty-five days, the department shall either issue a permit, with or without conditions, deny approval, or make a determination that the review and approval process created by this section is not appropriate for the proposed project. The department shall base this determination on identification during the comment period of adverse impacts that cannot be mitigated by the conditioning of a permit. If the department determines that the review and approval process created by this section is not appropriate for the proposed project, the department shall notify the applicant and the appropriate local governments of its determination. The applicant may reapply for approval of the project under other review and approval processes.

(II) Any person aggrieved by the approval, denial, conditioning, or modification of a permit under this section may formally appeal the decision to the hydraulic appeals board pursuant to the provisions of this chapter.

No local government may require permits or charge fees for fish habitat enhancement projects that meet the criteria of (p)(iii)(A) of this subsection and that are reviewed and approved according to the provisions of this section.

WAC 173-27-045 –

Developments Not Subject to the Shoreline Management Act

[Statutory Authority: RCW 90.58.030 (3)(e), 90.58.045, 90.58.065, 90.58.140(9), 90.58.143, 90.58.147, 90.58.200, 90.58.355, 90.58.390, 90.58.515, 43.21K.080, 71.09.250, 71.09.342, 77.55.181, 89.08.460, chapters 70.105D, 80.50 RCW. WSR 07-02-086 (Order 05-12), § 17327-045, filed 1/2/07, effective 2/2/07.]

Certain developments are not required to meet requirements of the Shoreline Management Act as follows:

(1) Pursuant to RCW 90.58.390, certain secure community transition facilities are not subject to the Shoreline Management Act. An emergency has been caused by the need to expeditiously site facilities to house sexually violent predators who have been committed under chapter 71.09 RCW. To meet this emergency, secure community transition facilities sited pursuant to the preemption provisions of RCW 71.09.342 and secure facilities sited pursuant to the preemption provisions of RCW 71.09.250 are not subject to the provisions of this chapter.

This section expires June 30, 2009.

(2) Pursuant to RCW 90.58.045 regarding environmental excellence program agreements, notwithstanding any other provision of law, any legal requirement under the Shoreline Management Act, including any standard, limitation, rule, or order is superseded and replaced in accordance with the terms and provisions of an environmental excellence program agreement, entered into under chapter 43.21K RCW.

---

(3) Pursuant to RCW 90.58.355 regarding hazardous substance remedial actions, the procedural requirements of the Shoreline Management Act shall not apply to any person conducting a remedial action at a facility pursuant to a consent decree, order, or agreed order issued pursuant to chapter 70.105D RCW, or to the department of ecology when it conducts a remedial action under chapter 70.105D RCW. The department of ecology shall ensure compliance with the substantive requirements of chapter 90.58 RCW, chapter 17326 WAC and the local master program through the consent decree, order, or agreed order issued pursuant to chapter 70.105D RCW, or during the department-conducted remedial action, through the procedures developed by the department pursuant to RCW 70.105D.090.

(4) The holder of a certification from the governor pursuant to chapter 80.50 RCW shall not be required to obtain a permit under chapter 90.58 RCW.